

Nationwide's Health of Housing Markets (HoHM) Report

Nationwide Economics

2016 Q4

Data as of 2016 Q3



HoHM Report Executive Summary:

- The national LIHHM* suggests that the overall U.S. housing market continues to be healthy with a positive outlook over the next year, as solid job growth and a pick-up in household formations mostly offset rising home prices and interest rates.
- Regionally, the LIHHM rankings show positive housing trends in the majority of metropolitan statistical areas (MSAs). This suggests that most local housing markets should see sustainable expansion over the next year.
- Energy sector slowdowns continue to depress the housing outlooks in several MSAs in energy-intensive areas, especially in North Dakota, Wyoming, Texas, and Louisiana. Stabilizing oil prices and employment readings, however, should soon improve the housing metrics in these regions.
- More than a quarter of MSAs are rated as healthy and most sustainable — indicating a positive outlook for 2017 and a very small likelihood of a downturn in housing activity.

* Leading Index of Healthy Housing Markets (LIHHM): A data-driven view of the near-term performance of housing markets based upon current health indicators for the national housing market and 400 metropolitan statistical areas (MSAs) and divisions across the country.



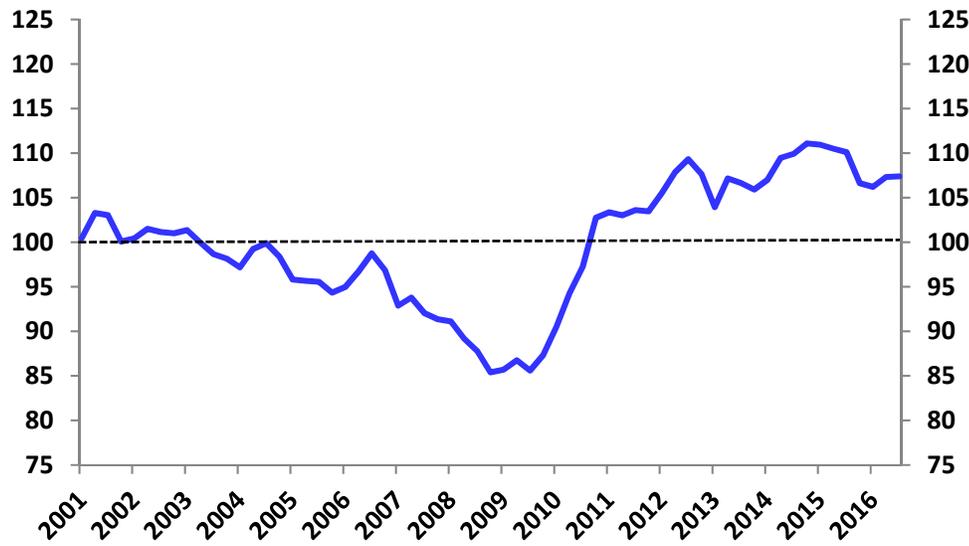
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The national LIHHM continues to reflect a sustainable U.S. housing market

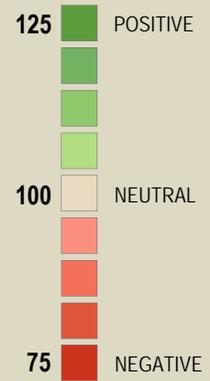
The current value for the national LIHHM* is 107.4, little changed from the second quarter and slightly lower than the reading from a year ago. Improved growth in household formations and continued declines in serious delinquencies are boosting the LIHHM score, while solid job growth also remains supportive of housing demand. On the downside, home price appreciation continues to run above the long-term average, although still-low (albeit rising) mortgage rates are helping to keep housing affordable.

Regionally, the LIHHM performance rankings indicate that the vast majority of metro areas across the country are healthy, suggesting that few regional housing markets are vulnerable to a housing downturn in the near term. The energy sector continues to depress scores for a few local markets, but with oil prices and energy sector employment stabilizing, the outlook should improve in coming quarters.

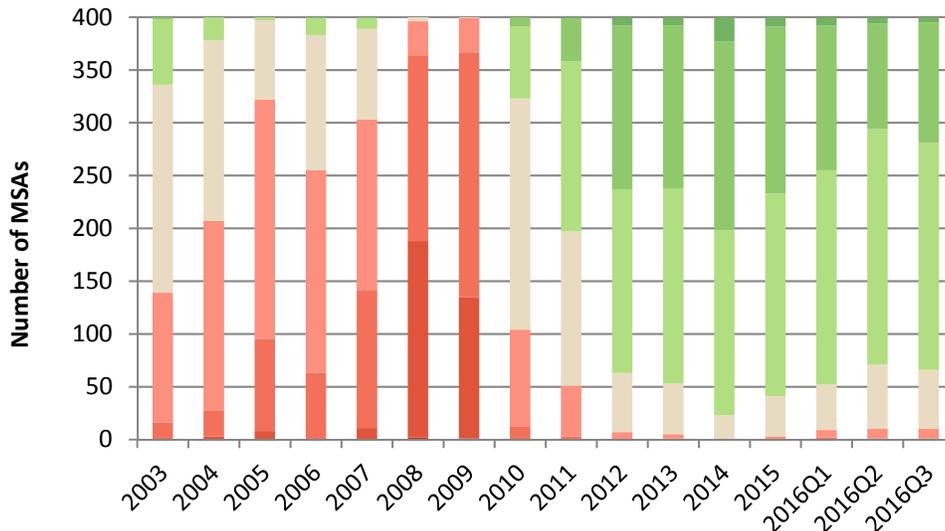
National LIHHM



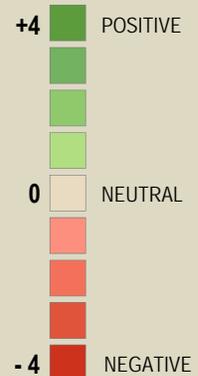
LIHHM Scores*



MSA LIHHM Performance Rankings



Performance Rankings*

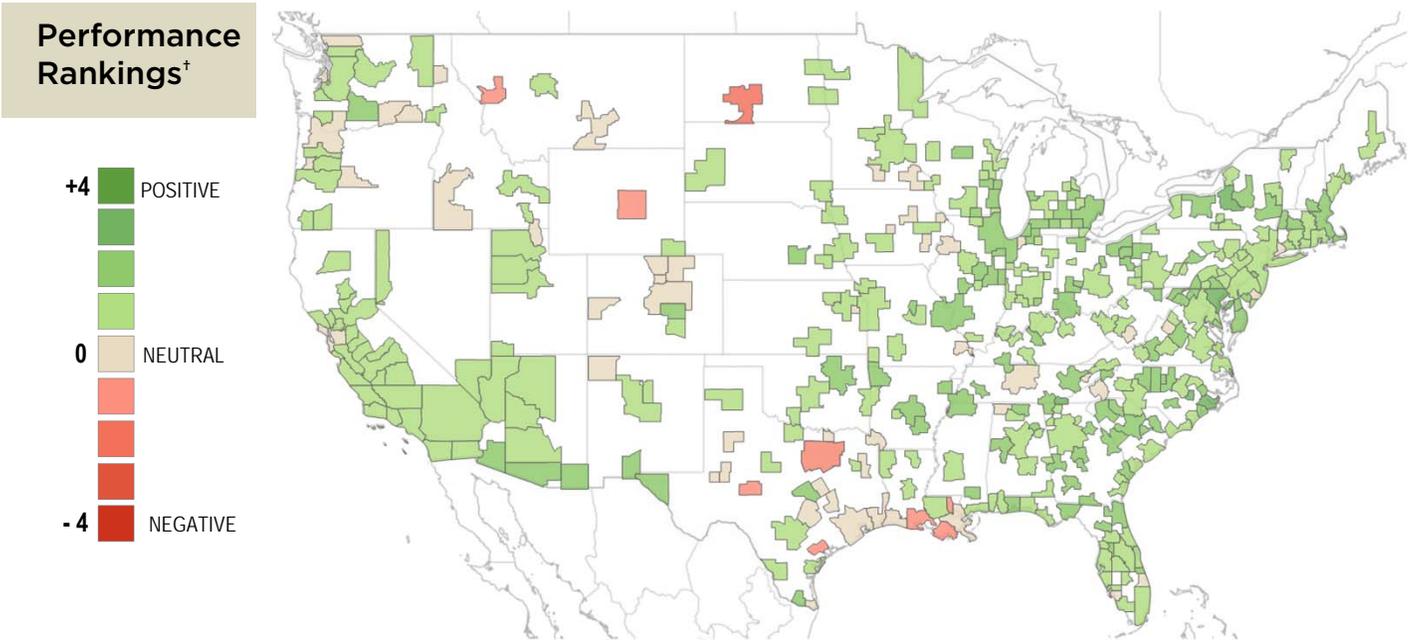


* See appendix for full descriptions

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The regional LIHHM rankings show continued sustainability in the majority of housing markets

- Five MSAs have a ranking of +3 and an additional 114 have a ranking of +2, indicating that more than a quarter of MSAs show very healthy housing fundamentals (see page 5 for more).
- The majority of the bottom 10 MSAs are located in energy-intensive states (North Dakota, Wyoming, Texas, and Louisiana) and all have negative rankings — suggesting a modest risk of a housing slowdown in the next year. Another 56 MSAs are ranked neutral, one step away from a less-than-optimistic outlook.
- Unsustainable house price growth is lowering affordability and making the outlook less positive for a few larger cities in the western half of the country, including Dallas, Denver, Portland, and San Francisco.



Top 10 MSAs

Rank	Metropolitan Statistical Area
1	New Bern NC
2	Cleveland TN
3	Syracuse NY
4	Goldsboro NC
5	Baltimore-Columbia MD
6	Fayetteville NC
7	Valdosta GA
8	Cumberland MD-WV
9	Columbia SC
10	Augusta-Richmond GA-SC

Bottom 10 MSAs

Rank	Metropolitan Statistical Area
400	Bismarck ND
399	Victoria TX
398	Casper WY
397	Houma-Thibodaux LA
396	Lafayette LA
395	San Angelo TX
394	Dallas-Plano-Irving TX
393	Anchorage AK
392	Missoula MT
391	Hammond LA

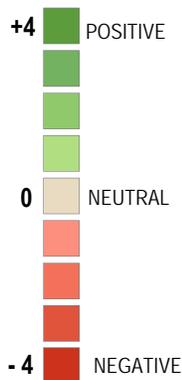
† Data as of 2016 Q3

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Only one of the top 40* largest MSAs has a LIHHM performance ranking that is negative (mainly due to worsening affordability), while five more of these MSAs are neutral. This suggests that most of the major U.S. housing markets are sustainable with little chance of a downturn in the near future.

MSAs by size (Top 40), with corresponding performance rankings

Performance Rankings:



	Metropolitan Statistical Area	Performance Rankings		
		Current [†]	Prior Qtr	Prior Year
1	New York-Jersey City-White Plains NY-NJ	1	1	2
2	Los Angeles-Long Beach-Glendale CA	1	1	1
3	Chicago-Naperville-Arlington Heights IL	2	1	2
4	Houston-The Woodlands-Sugar Land TX	0	0	1
5	Atlanta-Sandy Springs-Roswell GA	1	1	2
6	Washington-Arlington-Alexandria DC-VA	1	1	1
7	Phoenix-Mesa-Scottsdale AZ	1	1	1
8	Dallas-Plano-Irving TX	-1	-1	0
9	Minneapolis-St. Paul-Bloomington MN-WI	1	1	2
10	Riverside-San Bernardino-Ontario CA	1	1	1
11	Tampa-St. Petersburg-Clearwater FL	1	1	2
12	San Diego-Carlsbad CA	1	1	1
13	Seattle-Bellevue-Everett WA	1	0	1
14	St Louis MO-IL	2	2	2
15	Denver-Aurora-Lakewood CO	0	0	1
16	Baltimore-Columbia-Towson MD	3	2	2
17	Anaheim-Santa Ana-Irvine CA	1	1	1
18	Warren-Troy-Farmington Hills MI	1	1	2
19	Pittsburgh PA	1	1	2
20	Oakland-Hayward-Berkeley CA	1	1	1
21	Portland-Vancouver-Hillsboro OR-WA	0	0	1
22	Nassau County-Suffolk County NY	2	1	1
23	Charlotte-Concord-Gastonia NC-SC	1	1	2
24	Miami-Miami Beach-Kendall FL	1	1	1
25	Orlando-Kissimmee-Sanford FL	1	1	1
26	Cambridge-Newton-Framingham MA	2	2	2
27	Newark NJ-PA	2	2	2
28	Fort Worth-Arlington TX	0	0	1
29	Cleveland-Elyria OH	2	1	3
30	Cincinnati OH-KY-IN	2	2	2
31	San Antonio-New Braunfels TX	1	1	2
32	Sacramento-Roseville-Arden-Arcade CA	1	1	1
33	Philadelphia PA	1	2	2
34	Kansas City MO-KS	1	1	2
35	Columbus OH	1	1	2
36	Las Vegas-Henderson-Paradise NV	1	1	1
37	Indianapolis-Carmel-Anderson IN	1	1	2
38	Boston MA	2	2	2
39	Fort Lauderdale-Pompano Beach-FL	1	1	2
40	Austin-Round Rock TX	0	0	0

[†] Data as of 2016 Q3

* Largest 40 determined by number of households

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The most sustainable housing markets have the most optimistic outlook for 2017

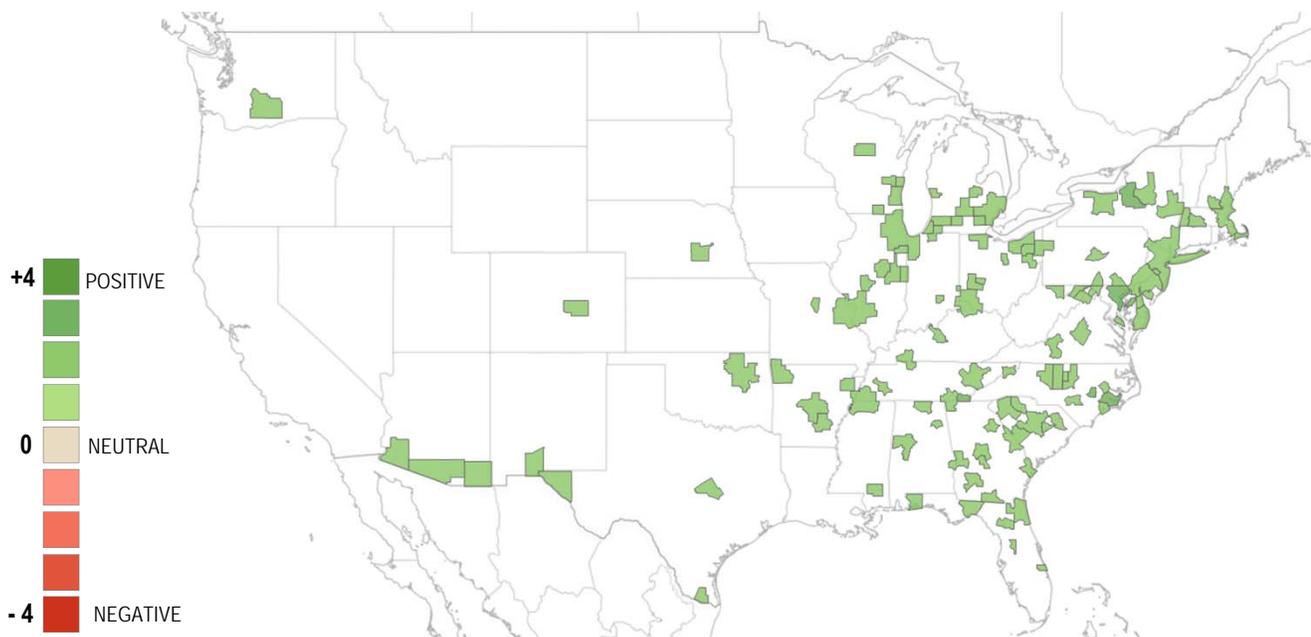
In this quarter's release, there are 119 metropolitan statistical areas (MSAs) with a LIHHM ranking of +2 or +3 — a reading indicating markets with the most sustainable trends in housing fundamentals. The strong readings suggest that these local markets are most likely to see continued sustainable growth in home sales activity and house price appreciation in 2017. Moreover, there is little chance of a downturn in the housing sector in these markets over the next year or so.

Regionally, the majority of the most sustainable housing markets are located east of the Mississippi River. A few of the largest metro areas of the country, including New York City, Boston, Chicago, and Philadelphia, are within this group. Note that the ratings including the broader suburban areas of New York City and Philadelphia are more positive than those in the central cores of those MSAs.

There are a few common characteristics among the most sustainable housing markets:

- **Sustainable house price growth:** House price appreciation over the past year in these MSAs is close to their long-term average — indicative of sustainable growth in home values. Conversely, house price growth in many of the neutral or negatively rated MSAs is too hot or too cold compared to average.
- **Affordable housing:** Relative to income gains, housing remains affordable in the majority of the most sustainable markets. This suggests that house prices are in line with a homebuyer's ability to pay and are not pushing potential homebuyers out of the market by being too expensive.
- **Solid job growth:** Job and income gains in these markets continue to drive demand for housing by promoting household formations, especially by the millennial generation. In several of the lowest-rated MSAs, unemployment is rising as job growth wanes, reducing the underlying demand for housing.
- **Falling delinquency rates:** Default and delinquency rates are declining in nearly all of the most sustainable markets, indicating that homebuyers have the income to meet their mortgage obligations. Weaker job and income readings in some of the neutral or negatively rated MSAs can act as an early signal of rising delinquency rates in coming quarters.

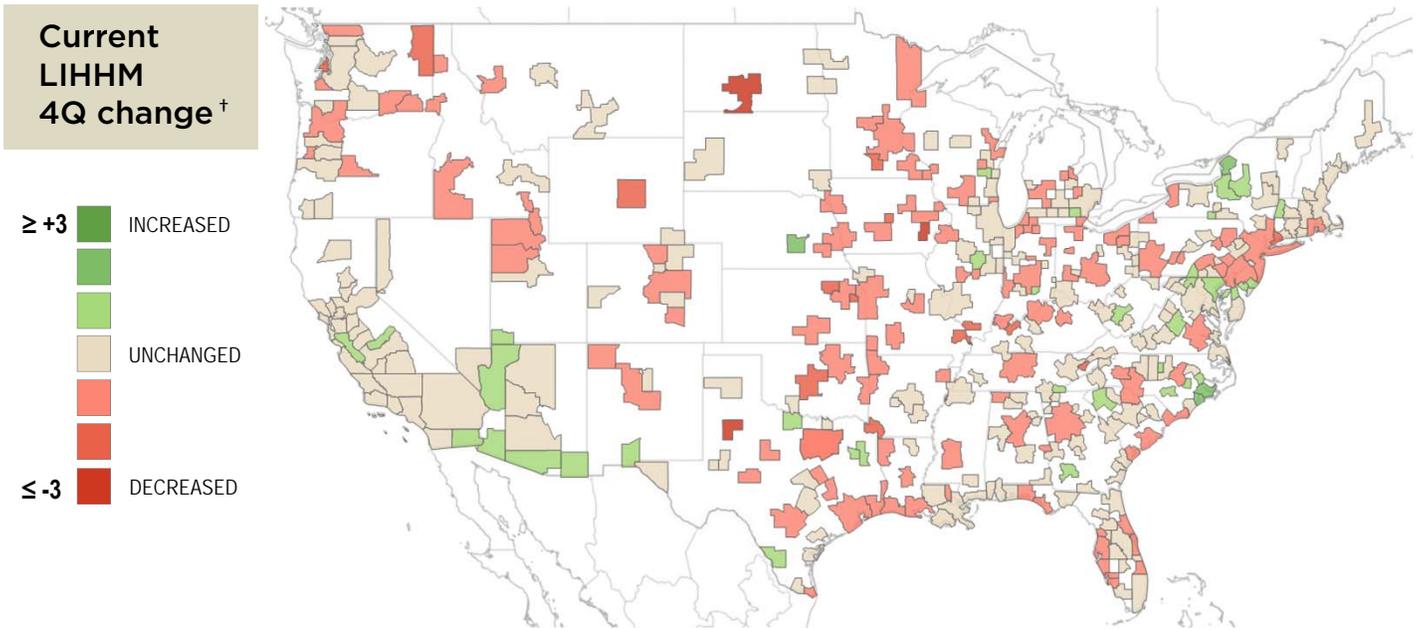
Most Sustainable MSAs: LIHHM Rankings +2 or +3



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Just as the national LIHHM reading has slipped a bit this year, the LIHHM rankings in an increasing number of MSAs have edged down over the past four quarters

- The near-term sustainability of housing markets is best measured by the current LIHHM (page 3), but looking at shifts in the LIHHM over the course of a year can provide additional insights.
- While more than a third of all MSAs saw their rankings drop in recent quarters, the majority of these pulled back by only one ranking. There were only 19 MSAs that declined more sharply (down by 2+ rankings), including several MSAs in areas dependent upon oil production and distribution.
- Since the LIHHM scores in many MSAs remained positive over the past year, about half of the LIHHM rankings have not changed — indicative of ongoing health in local housing markets.



Largest Increase

Rank	Metropolitan Statistical Area
1	Watertown-Fort Drum NY
2	New Bern NC
3	Jacksonville NC
4	Grand Island NE
5	Fayetteville NC
6	Dutchess County NY
7	Charleston WV
8	Pittsfield MA
9	Cleveland TN
10	Elmira NY

Largest Decrease

Rank	Metropolitan Statistical Area
400	Bismarck ND
399	Lubbock TX
398	Anchorage AK
397	Iowa City IA
396	Texarkana TX-AR
395	Owensboro KY
394	Casper WY
393	Manhattan KS
392	Bremerton-Silverdale WA
391	Carbondale-Marion IL

† Change in performance ranking; Data as of 2016 Q3

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Appendix

Leading Index of Healthy Housing Markets (LIHHM)

Nationwide's LIHHM is a data-driven view of the near-term performance of housing markets based upon current health indicators for the national housing market and 400 metropolitan statistical areas (MSAs*) and divisions across the country. For each MSA, the LIHHM uses local-level data to incorporate the idiosyncratic characteristics of regional housing markets. The focus of the LIHHM is on the entire housing market's health, rather than a projection of house prices or home sales.

Nationwide Economics LIHHM methodology

The LIHHM is calculated using a number of variables that describe many of the drivers of the housing market for each MSA. In order to provide the best indicator of housing health, the included variables and corresponding weights for each provide the optimal leading perspective on future housing markets for each MSA. The drivers can be grouped into the following categories:

1. **Employment**
2. **Demographics**
3. **Mortgage Market**
4. **House Prices**

As an illustration, if job growth increases in an MSA, then the resulting rise in incomes creates additional housing demand. Consumers have a greater ability to earn and save for home purchases, increasing sales and pushing up house prices. The LIHHM measures the movements in the included employment, demographic, mortgage market, and house price variables versus the long-term trends within each MSA.

These drivers are used to derive an overall LIHHM score on a scale from 75 to 125 centered around a neutral value of 100. These values are placed into performance rankings to allow for better comparisons across MSAs. These performance rankings are the key metric in comparing the MSAs both to each other and across time. Raw LIHHM values are used for calculation purposes only and will only be shown on the national level as the national score is standalone and is not compared to other areas.

* MSA: Geographical region with high population density and close economic ties throughout the nearby area, capturing 85-90% of the U.S. population

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