

Health of Housing Markets (HoHM) Report

From Nationwide Economics

2018 Q1

(Data as of 2017 Q4)

Low housing inventory heading into selling season

- The national LIHHM* edged lower this quarter as unsustainably rapid house price appreciation weakened the outlook for the U.S. housing market. The overall ranking remains positive, however, as household formations have been very strong, supported by a solid labor market.
- The inventory of existing homes for sale recently fell to an all-time low, constraining sales and housing availability. Ultra-low inventory levels are cutting days on the market for sellers while pushing up prices for homebuyers.
- In the aftermath of last year's hurricanes, delinquency rates spiked along the Gulf Coast of Texas and throughout Florida. This lowered the scores for these MSAs, with the Houston area slipping into the bottom 10 list.
- The LIHHM rankings in over 80 percent of local housing markets show a positive outlook for the housing sector. There are only a few markets with negative rankings, mostly due to affordability concerns following several years of unsustainable house price appreciation.

^{*} Leading Index of Healthy Housing Markets (LIHHM): A data-driven view of the near-term performance of housing markets for the nation as a whole as well as for 400 metropolitan statistical areas (MSAs) and divisions.



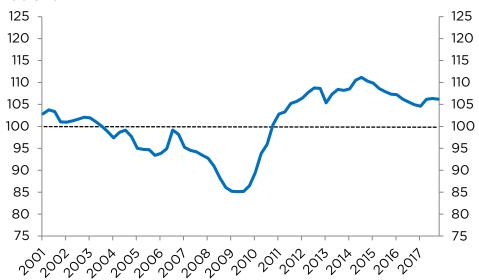


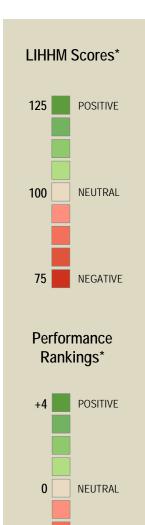
Overheated house prices versus faster household formations

The national LIHHM slipped a tad to 106.2, but it is still solidly in positive territory. Affordability is deteriorating as national house price gains continue to run well above the long-term average and overall income growth. Faster household formations offset much of the negative price impacts, helping to keep the near-term outlook for housing performance little changed. The backdrop for housing sector health remains positive with ongoing job gains, rising incomes, and a sustainable mortgage market.

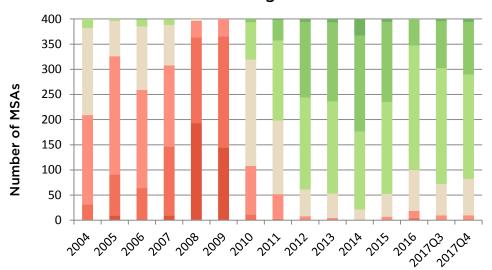
On a regional level, the LIHHM performance rankings suggest that the majority of metro areas across the country are healthy. The few negative rankings are primarily characterized by unsustainable house price increases, which is hurting housing sector health in some areas. A lack of housing inventory, which creates excess housing demand, is the primary factor boosting prices so sharply.

National LIHHM





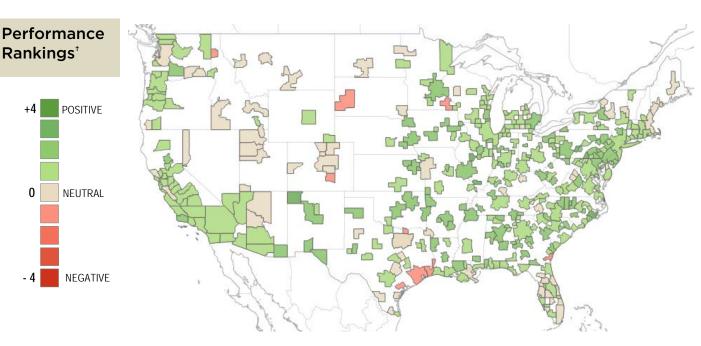
MSA LIHHM Performance Rankings





Regional LIHHM rankings show sustainable housing trends in most housing markets

- This quarter there are six MSAs with a +3 ranking while 105 MSAs have a ranking of +2, suggesting very
 healthy housing fundamentals in those markets. Overall, more than 80 percent of metro areas across the
 country have a positive LIHHM ranking.
- Most of the bottom 10 MSAs have worsening affordability as rapid price house appreciation makes it
 increasingly difficult for homebuyers to purchase. Delinquency rates rose sharply in MSAs along the Gulf
 Coast of Texas and in Florida as a result of hurricanes, lowering the rankings for these areas.
- An additional 72 MSAs are ranked neutral, indicating a mixed outlook for near-term housing health.



Top 10 MSAs

Rank	Metropolitan Statistical Area		
1	Johnstown PA		
2	Carbondale-Marion IL		
3	Springfield IL		
4	Farmington NM		
5	New Bern NC		
6	Chambersburg-Waynesboro PA		
7	Pittsburgh PA		
8	Auburn-Opelika AL		
9	Harrisburg-Carlisle PA		
10	Erie PA		

Bottom 10 MSAs

Rank	Metropolitan Statistical Area	
400	Victoria TX	
399	Rapid City SD	
398	Sherman-Denison TX	
397	Beaumont-Port Arthur TX	
396	Anchorage AK	
395	Houston-Sugar Land TX	
394	Pueblo CO	
393	Brunswick GA	
392	Rochester MN	
391	Coeur d'Alene ID	

[†] Data as of 2017 Q4

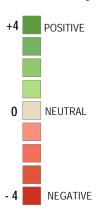




Only one of the top 40° largest MSAs has a negative LIHHM performance ranking, while an additional nine are neutral. These lower scores are primarily the result of unsustainably rapid house price gains. Most of the major U.S. housing markets show sustainable trends with little chance of a downturn in the near term.

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

Performance Rankings:



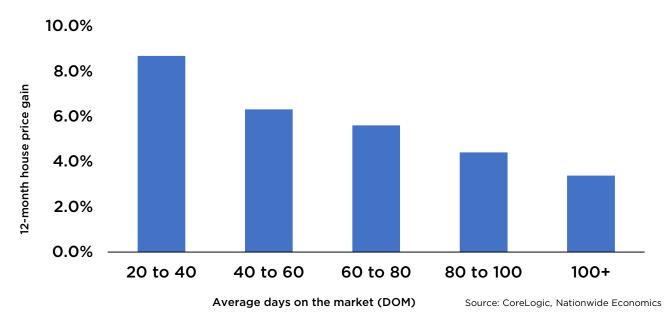
narket	narkets show sustainable trends with little chance of a downturn in the near term.				
			Performance Rankings		
-	Metropolitan Statistical Area	Current [†]	Prior Qtr	Prior Year	
1	New York-Jersey City-White Plains NY-NJ	1	1	1	
2	Los Angeles-Long Beach-Glendale CA	1	1	1	
3	Chicago-Naperville-Arlington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

[†] Data as of 2017 Q4

^{*} Largest 40 determined by number of households



Tighter home inventory conditions creating higher prices and rapid turnover



According to the National Association of Realtors, the number of existing homes on the market in December 2017 was at an all-time low, with fewer than 1.5 million homes available for sale. Extremely tight housing availability is holding back sales growth even as job gains and demographic shifts spur demand for single-family housing.

As the housing market enters the prime spring selling season, there are two key implications of the low housing inventory: (1) rapid sales transactions and (2) higher prices for homebuyers.

Across more than 200 MSAs, the average days on the market (DOM) for a home in 2017 was 67 days. This is a sharp decline from the peak in 2011 when the average DOM was 120 days. The conditions in some local housing markets are much faster, with a typical sales transaction taking less than 40 days from listing to signing (see table on right).

Rapid house price gains are another result of the tight housing inventory. At a national level, the CoreLogic House Price Index (HPI) rose by 6.6 percent during 2017 — well above average as the available homes on the market dwindled.

There is a clear correlation between faster price gains and faster sales markets. HPI growth in housing markets with average DOM less than 40 days is more than twice those above 100 days—reducing housing affordability in tight markets.

MSAs with lowest average DOM in 2017

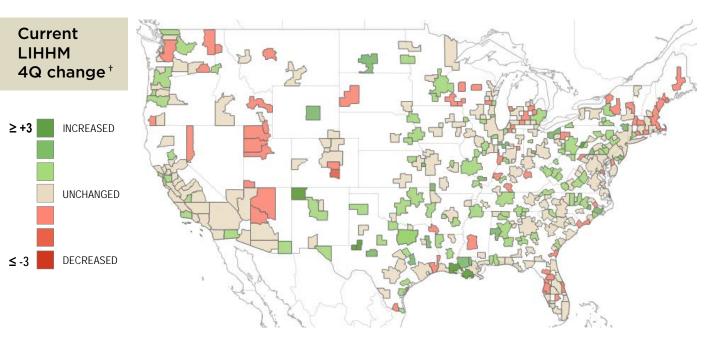
Metropolitan Statistical Area	Average DOM
Kennewick-Richland WA	31
Denver-Aurora-Lakewood CO	33
Colorado Springs CO	34
San Francisco-Redwood City CA	35
Boise City ID	37
Greeley CO	37
San Diego-Carlsbad CA	37
Portland-Vancouver OR-WA	38
Boulder CO	38
Sacramento-Roseville CA	39
Fort Worth-Arlington TX	39
Dallas-Plano-Irving TX	40
Tacoma-Lakewood WA	40
Kansas City MO-KS	41
Louisville KY-IN	41

Source: CoreLogic, Nationwide Economics



The LIHHM ranking in about half of MSAs has been stable 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 approximately one-fifth of all MSAs saw their rankings drop over the past year, the majority of
 these pulled back by only one ranking. There was just one MSA that declined more sharply (down by
 two rankings or more), indicative of a worsening housing outlook. The MSAs with declines usually had a
 common trait: reduced affordability as home price gains outpace income growth.
- More than half of the LIHHM rankings were unchanged over the past year suggesting little change in the outlooks for these housing markets. A quarter of MSAs saw their rankings climb.



Largest Increase

Rank	Metropolitan Statistical Area		
1	Farmington NM		
2	Odessa TX		
3	Johnstown PA		
4	Houma-Thibodaux LA		
5	Lafayette LA		
6	Midland TX		
7	Longview TX		
8	8 Casper WY		
9	9 Bismarck ND		
10	Baton Rouge LA		

Largest Decrease

Rank	Metropolitan Statistical Area	
400	Pueblo CO	
399	Colorado Springs CO	
398	398 Springfield MA	
397	Cumberland MD-WV	
396	Beaumont-Port Arthur TX	
395	Rapid City SD	
394	Provo-Orem UT	
393	Wausau WI	
392	Ogden-Clearfield UT	
391	St. George UT	

[†] Change in performance ranking; Data as of 2017 Q4



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.

See more at blog.nationwide.com/housing

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



Authored by Nationwide Economics



DAVID BERSON, PhD Senior Vice President, Chief Economist

David holds a doctorate in Economics and a master's degree in Public Policy from the University of Michigan. Prior to Nationwide, David served as Chief Economist, Strategist and Head of Risk Analytics for The PMI Group, Inc., and Vice President and Chief Economist for Fannie Mae. David has also served as Chief Financial Economist at Wharton Econometrics and visiting scholar at the Federal Reserve Bank of Kansas City. His government experience has included roles with the President's Council of Economic Advisors, U.S. Treasury Department and the Office of Special Trade Representative. He is a past President of the National Association for Business Economics.



BRYAN JORDAN, CFA
Deputy Chief Economist

Bryan is a frequent author and knowledgeable source on economic topics, and has been featured in The Wall Street Journal and New York Times. Bryan holds degrees in Economics and Political Science from Miami University and has earned the Chartered Financial Analyst designation. He currently serves as Chairman of the Ohio Council on Economic Education and is a member of the Ohio Governor's Council of Economic Advisors, the National Association for Business Economics, and the Bloomberg monthly economic forecasting panel.



BEN AYERS, MS Senior Economist

Ben authors periodic economic analyses from the Nationwide Economics team, as well as commentary on key economic topics. Ben is also responsible for understanding and analyzing the enterprise business drivers to assist the strategic planning process. He holds a Master of Science in Economics from the Ohio State University, specializing in applied economic analysis, and a BSBA from the Fisher College of Business at the Ohio State University, with a focus on economics and international business.

Additional contributors: Ankit Gupta, CFA, Steve Hall, and Aaron Reincheld

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