

Nationwide's Health of Housing Markets (HoHM) Report

Nationwide Economics

2017 Q1

Data as of 2016 Q4



HoHM Report Executive Summary:

- The national LIHHM* maintained a positive reading for the U.S. housing market, but it fell to the lowest level in several years. Unsustainably strong house price gains are weighing on affordability and household formations slowed.
- Regionally, the LIHHM rankings show positive and healthy housing trends in most metropolitan statistical areas (MSAs), suggesting sustainable expansion in many areas over the next year.
- Despite the overall positive regional LIHHM rankings, nearly all MSA ratings are unchanged or down over the past year. While the outlook in energy-intensive areas is still weaker, more MSAs elsewhere in the country have slipped into neutral or negative rankings as well.
- House price appreciation in some hot housing markets has been well above the long-term average for these areas since at least 2014 — generating concerns about housing affordability and reducing the outlook for sustainable growth.

* 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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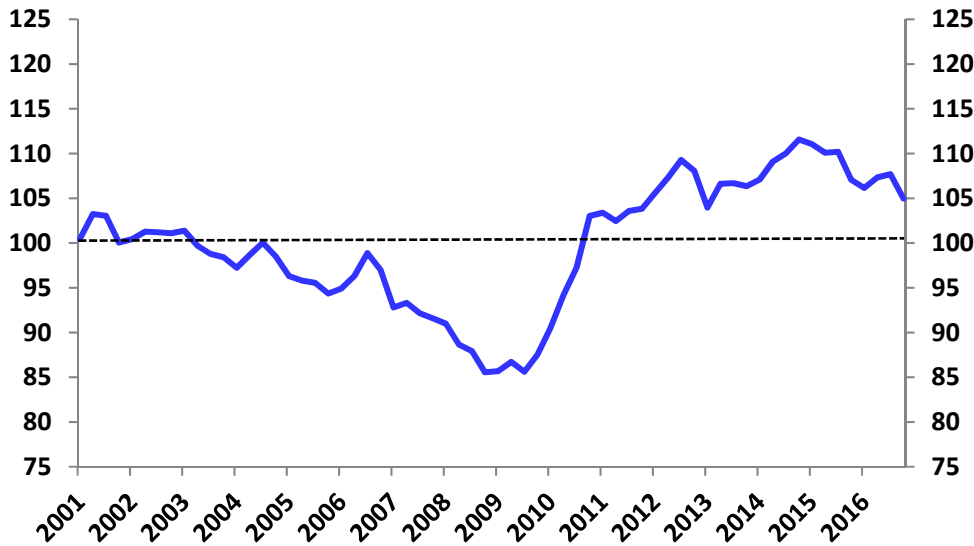
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Rapid house gains are weighing on the sustainability of the U.S housing market

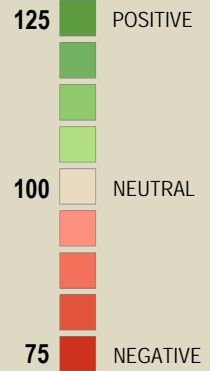
While the current national LIHHM* is positive at 105.0, this is the lowest reading since the first quarter of 2013. Solid job and income gains remain supportive of housing demand, but the latest household formation figures surprisingly have slipped below the long-term demographic trend. Moreover, national house price appreciation is well-above the long-term average and is eroding housing affordability, especially for first-time homebuyers.

Regionally, the LIHHM performance rankings indicate that the majority of metro areas across the country are healthy for now, but similar unsustainable house price trends are reducing the outlook for housing in some local housing markets. While oil prices are up and energy sector employment is slowly stabilizing, areas with strong ties to energy production continue to show a weaker outlook for housing.

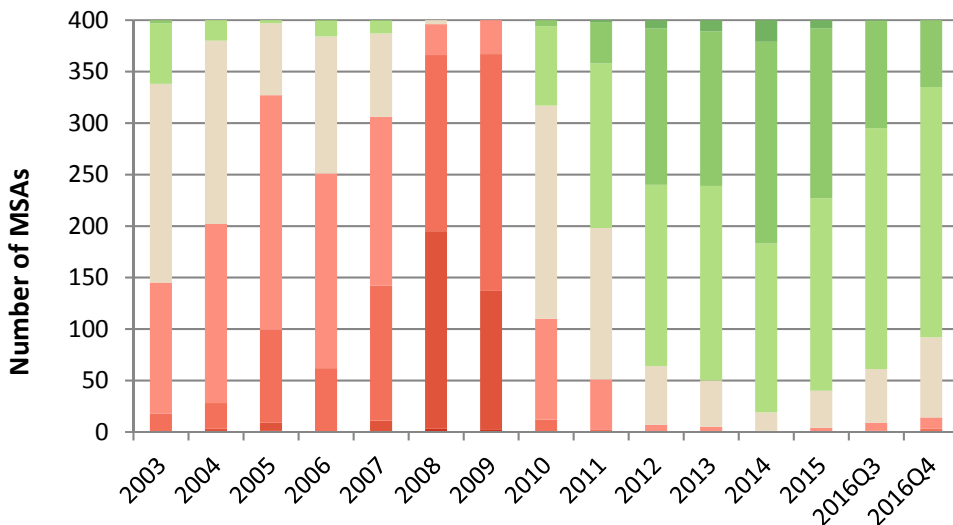
National LIHHM



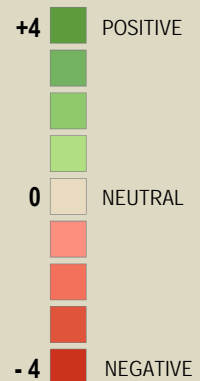
LIHHM Scores*



MSA LIHHM Performance Rankings



Performance Rankings*

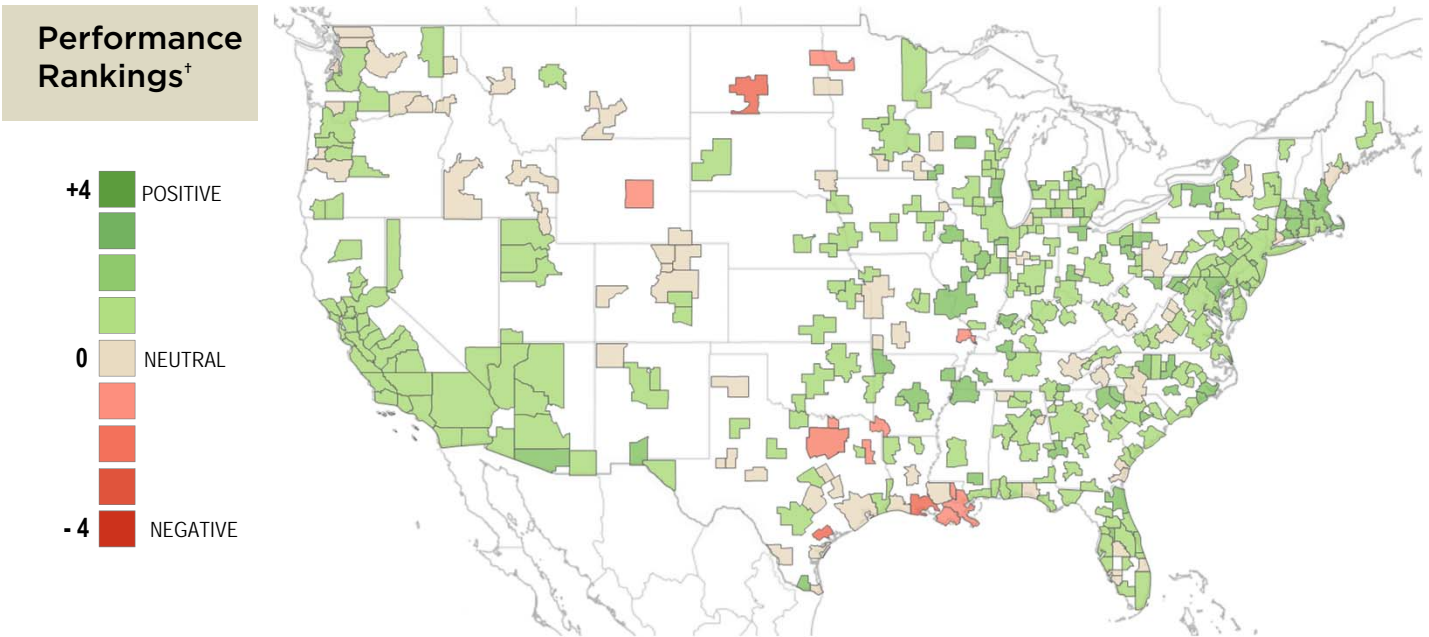


* See appendix for full descriptions

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The regional LIHHM rankings show continued healthy trends in most housing markets

- There are no longer any MSAs with a +3 ranking while 65 MSAs have a ranking of +2, still suggesting healthy housing fundamentals. This is the lowest number of MSAs +2 or greater since 2011 Q4.
- The majority of the bottom 10 MSAs are located in energy-intensive states (North Dakota, Wyoming, Texas, and Louisiana) and all have negative rankings. There are 14 MSAs with a negative rating this quarter, suggesting a modest risk of a housing slowdown over the next year in those markets.
- Another 78 MSAs are ranked neutral, indicating only modest risk of a housing downturn in the near term. The number of neutrally rated MSAs has expanded in each quarter over the past year.



Top 10 MSAs

Rank	Metropolitan Statistical Area
1	California-Lexington Park MD
2	New Bern NC
3	Clarksville TN-KY
4	Springfield MA
5	Winston-Salem NC
6	Pittsfield MA
7	Baltimore-Columbia-Towson MD
8	Cumberland MD-WV
9	Fayetteville NC
10	Canton-Massillon OH

Bottom 10 MSAs

Rank	Metropolitan Statistical Area
400	Bismarck ND
399	Lafayette LA
398	Victoria TX
397	Houma-Thibodaux LA
396	Longview TX
395	Casper WY
394	Texarkana TX-AR
393	Anchorage AK
392	Cape Girardeau MO-IL
391	Sherman-Denison TX

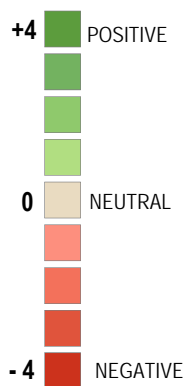
† Data as of 2016 Q4

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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 seven 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	1	2	2
4	Houston-The Woodlands-Sugar Land TX	0	0	0
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	1	1
14	St Louis MO-IL	2	2	2
15	Denver-Aurora-Lakewood CO	0	0	1
16	Baltimore-Columbia-Towson MD	2	2	2
17	Anaheim-Santa Ana-Irvine CA	1	1	1
18	Warren-Troy-Farmington Hills MI	1	1	1
19	Pittsburgh PA	0	1	2
20	Oakland-Hayward-Berkeley CA	1	1	1
21	Portland-Vancouver-Hillsboro OR-WA	1	0	1
22	Nassau County-Suffolk County NY	1	2	1
23	Charlotte-Concord-Gastonia NC-SC	0	1	1
24	Miami-Miami Beach-Kendall FL	1	1	1
25	Orlando-Kissimmee-Sanford FL	1	1	2
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	1	1	3
30	Cincinnati OH-KY-IN	1	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	0	1	2
35	Columbus OH	1	1	2
36	Las Vegas-Henderson-Paradise NV	1	1	1
37	Indianapolis-Carmel-Anderson IN	1	1	1
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 Q4

* Largest 40 determined by number of households

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Hot housing markets continue to see unsustainable house price gains

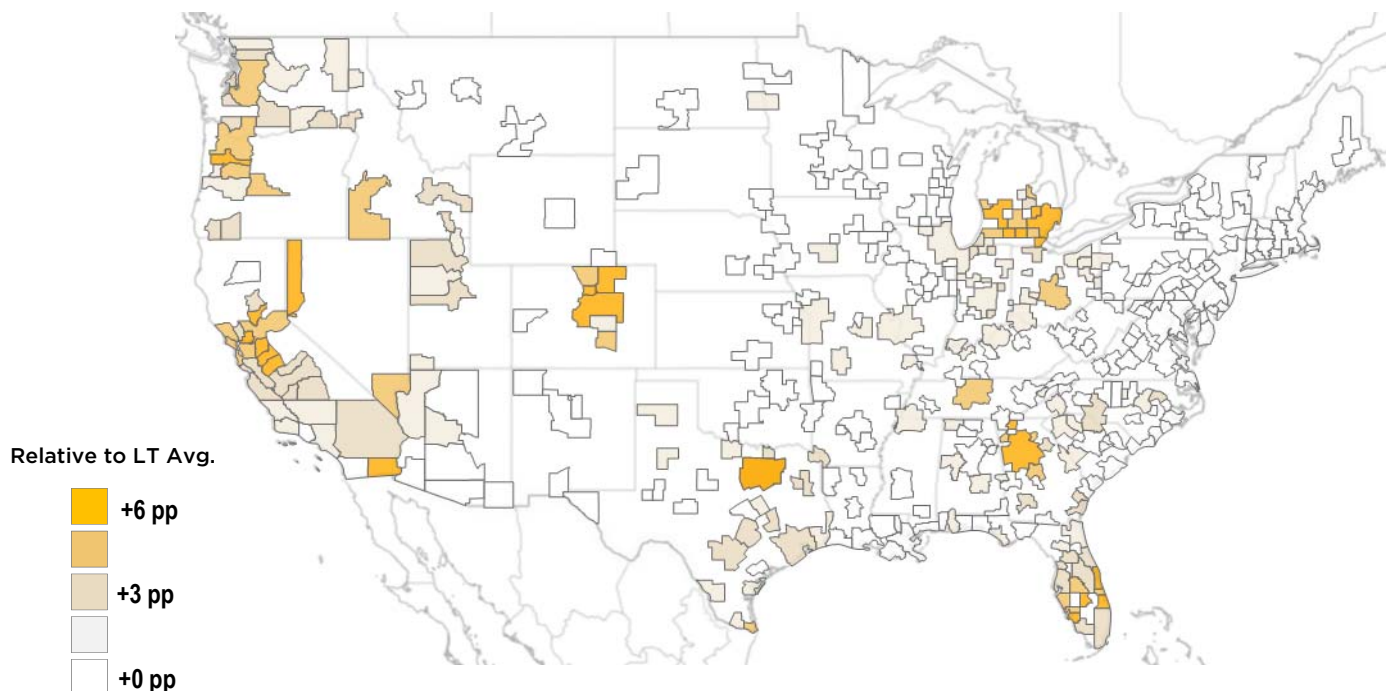
During 2016, there were nearly 300 metropolitan statistical areas (MSAs) that had house price appreciation greater than the local long-term average according to data from CoreLogic. This mirrors the increasingly rapid price growth at the national level. For a select group of MSAs, however, unsustainable house price trends have occurred over a longer period with the three-year average price increase sizably above the local housing market's own long-term average.

A few large metro areas (including Dallas, Denver, Atlanta, and San Francisco) have seen average price gains since 2014 of more than 6.0 percentage points above long-term average. Note that Detroit is a unique case given the long-lived depressed economic conditions that lowered the long-term average house price gain. Pockets in the Northwest as well as portions of Florida have primarily seen a rapid build-up in prices within the past year rather than over the entire 3-year period.

There are a few common characteristics among the hot housing markets:

- **Strong demand metrics:** Job and income gains in most of these markets are much stronger than the national average, promoting in-migration from other metro areas and faster-than-usual household formation. These factors are driving substantial demand for owner-occupied housing, especially from the millennial generation.
- **Low housing supply:** The supply of homes on the market at a national level is historically low as homebuilders struggle to keep up with homebuyer demand and existing homeowners remain in their appreciating homes. The mismatch between the supply and demand for housing is helping to push up prices nationally. Given the stronger household growth in the hot housing markets, the availability of homes is even more scarce, prompting the unsustainable price movements of the past few years.
- **Falling affordability:** Persistently rapid house price gains have lowered affordability relative to incomes in many of these MSAs to a concerning level. Lower affordability reduces the outlook for future growth by driving potential homebuyers out the market, especially first-time homebuyers. This is reflected in the falling LIHHM rankings for many of these housing markets.

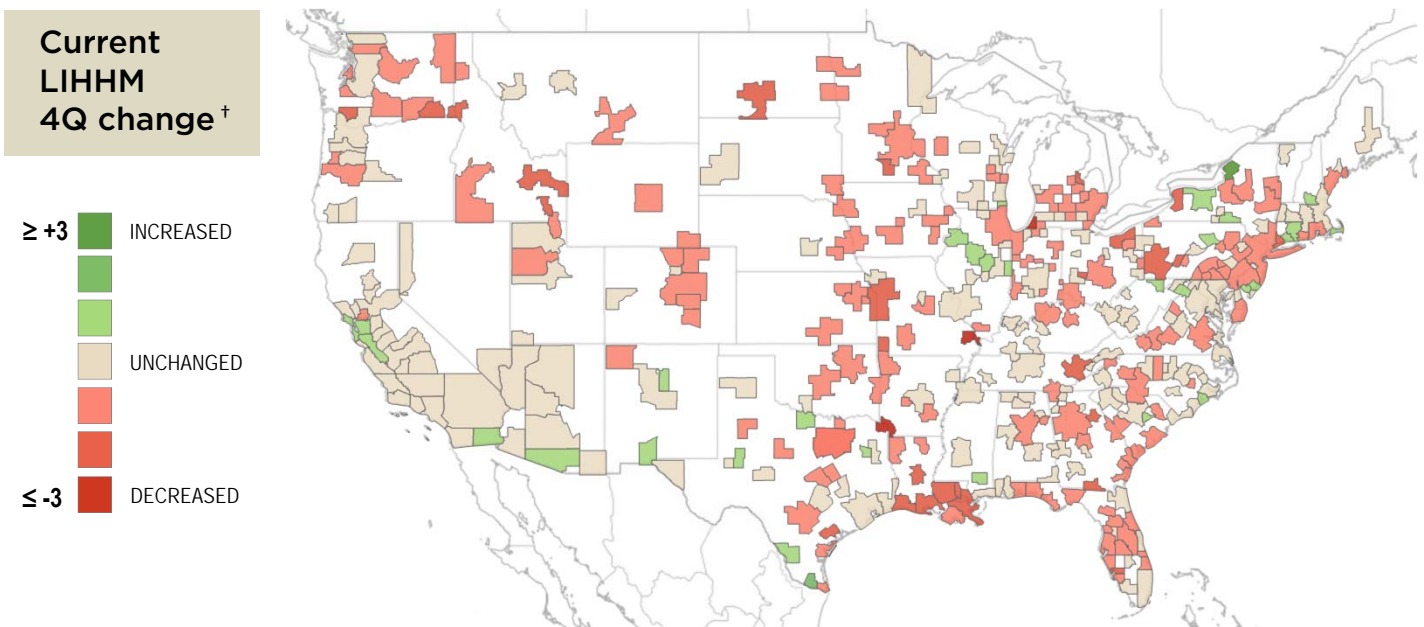
2014-16 house price gains above their long-term average



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The LIHHM rankings in most MSAs are unchanged or have declined 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 nearly half of all MSAs saw their rankings drop in recent quarters, the majority of these pulled back by only one ranking. There were only 30 MSAs that declined more sharply (down by two or three rankings), indicative of worsening housing outlooks in these local markets.
- About half of the LIHHM rankings have not changed over the past year — indicative of ongoing healthy trends in many of these local housing markets — while only 32 MSAs saw their rankings rise.



Largest Increase

Rank	Metropolitan Statistical Area
1	Watertown-Fort Drum NY
2	McAllen-Edinburg-Mission TX
3	Davenport-Moline-Rock Island IA
4	Peoria IL
5	Laredo TX
6	Jacksonville NC
7	Bloomington IL
8	El Centro CA
9	Las Cruces NM
10	Tyler TX

Largest Decrease

Rank	Metropolitan Statistical Area
400	Texarkana TX-AR
399	Cape Girardeau MO-IL
398	Niles-Benton Harbor MI
397	Bismarck ND
396	Pocatello ID
395	Athens-Clarke County GA
394	Baton Rouge LA
393	Knoxville TN
392	Victoria TX
391	Cleveland-Elyria OH

† Change in performance ranking; Data as of 2016 Q4

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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

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, Steve Hall, and Aaron Reinheld

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