

## Overview

The degree of confidence that U.S. consumers have in their local housing market can have a profound effect on their economic behavior. Yet, historically, there was no concerted and sustained effort to measure and track this important economic driver.

*The U.S. Housing Confidence Survey™* (HCS) is a unique, large-scale household survey developed specifically to facilitate systematic measurement, reporting and tracking of consumer confidence in housing markets across the United States. Data collected in HCS are used to calculate *The Housing Confidence Index™* (HCI), a forward-looking gauge of housing market health and leading indicator of future home value changes and macroeconomic activity.<sup>1</sup>

Unlike legacy housing market measures and economic sentiment measures, HCS:

- Focuses exclusively on the measurement of confidence in the specific real estate market where each adult household respondent resides.
- Separately gauges attitudes among homeowners (*The Homeowner Confidence Index™*) and renters (*The Renter Confidence Index™*) concerning homeownership and prevailing market conditions at both the national and individual metropolitan area levels.
- Measures expectations concerning future affordability and home values--for both short-term and long-term horizons--among both homeowners and renters.
- Via HCI, enables consistent and concise reporting of survey results for easy public consumption and comprehension.

HCS and HCI are produced by Pulsenomics LLC. This research effort was inspired, in part, by the encouragement, input, and lifetime work of Karl Case and Robert Shiller, with whom Pulsenomics founder Terry Loeb has collaborated over the past two decades.

## The U.S. Housing Confidence Survey

Every edition entails:

- More than **15,000 household surveys**
  - ✓ National sample
  - ✓ 25 Individual Metro-area samples
- Compilation of more than **700,000 individual responses** generated by the HCS survey questionnaire
- Computation and publication of a wide variety of housing confidence indexes composed of **768 unique data series**:
  - ✓ Housing Confidence (all-tenure headline index)
  - ✓ Homeowner Confidence (headline index)
  - ✓ Renter Confidence (headline index)
  - ✓ Housing Market Conditions (sub-index)
  - ✓ Housing Expectations (sub-index)
  - ✓ Homeownership Aspirations (sub-index)

Geographic levels:      Tenure categories:

- ✓ National
- ✓ Regional
- ✓ Metro area
- ✓ Homeowners
- ✓ Renters
- ✓ All-tenure

Household categories:

- ✓ All generations
- ✓ Millennials



*"Over the last three decades, we have learned a great deal about the dynamics of home prices. Our research shows that real estate values have enormous wealth effects, but the markets are inefficient, and are propelled by expectations of market participants. These housing confidence data are critical inputs to our understanding of consumer behavior, and where real estate markets and the economy may be heading."* - Karl "Chip" Case (1946-2016)

*"This survey and these indices will add immeasurably to our understanding of housing markets, with unprecedented detailed information through time and across geographical areas. We have always been mostly in the dark about fundamental drivers of home prices--now that will change."* - Robert Shiller Yale Professor, Nobel Laureate and Pulsenomics Honorary Adviser



## Why authoritative measures of U.S. housing confidence are important

- The number of U.S. housing market stakeholders is enormous, and housing is a key driver of the U.S. economy. Expected changes in U.S. home values have powerful wealth effects.
- The U.S. housing market has entered an historically volatile era; new, forward-looking complements to legacy real estate market metrics can improve risk management.
- Existing housing indices are, generally, driven by past transaction data—not prevailing attitudes and expectations that can shape future transactions, rents and prices paid.
- Contrary to common belief, existing economic sentiment and consumer confidence indices do not incorporate any measure of consumer attitudes concerning the housing market.

The most widely followed consumer sentiment and confidence indices in the U.S. reflect responses to a total of five survey questions, each with standard answer choices.

*Contrary to common belief and intuition, these closely watched economic indicators do not incorporate any measure of consumer attitudes concerning the housing market or home values.* (The five questions pertain to prevailing and expected family income, general financial status, business and job market conditions).

HCS was designed by Pulsenomics to address this critical information void, and via HCI, to complement existing leading indicators of economic activity, established housing market indices and legacy consumer sentiment gauges.

By systematically quantifying and tracking changes in housing confidence over time, HCS and HCI can enhance economic analysis, policy-making, decision-making, and risk management protocols pertaining to key U.S. housing markets, local economies, and the national economy.

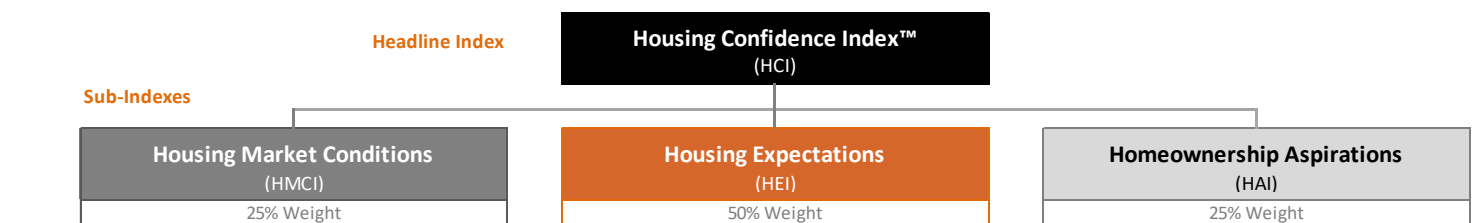
<sup>1</sup> Pulsenomics®, Housing Confidence Survey™, Housing Confidence Index™, Homeowner Confidence Index™, Renter Confidence Index™, Housing Market Conditions Index™, Housing Expectations Index™, and Homeownership Aspirations Index™ are trademarks of Pulsenomics LLC. Presently, these index values are updated bi-annually.

## Index Structure

Similar to the basic approach used to construct some of the most popular U.S. confidence indices and economic indicators, HCI is calculated using a weighted diffusion index methodology.<sup>2</sup> HCI is set on a scale of 0 to 100.

Index Value	Housing Confidence	Market Conditions	Expectations	Aspirations
> 50	Surplus	Favorable	Positive	Positive
= 50	Neutral	Neutral	Neutral	Neutral
< 50	Deficit	Unfavorable	Negative	Negative

The headline HCI is a weighted composite measure of three underlying sub-indices that quantify a unique dimension of housing market confidence.



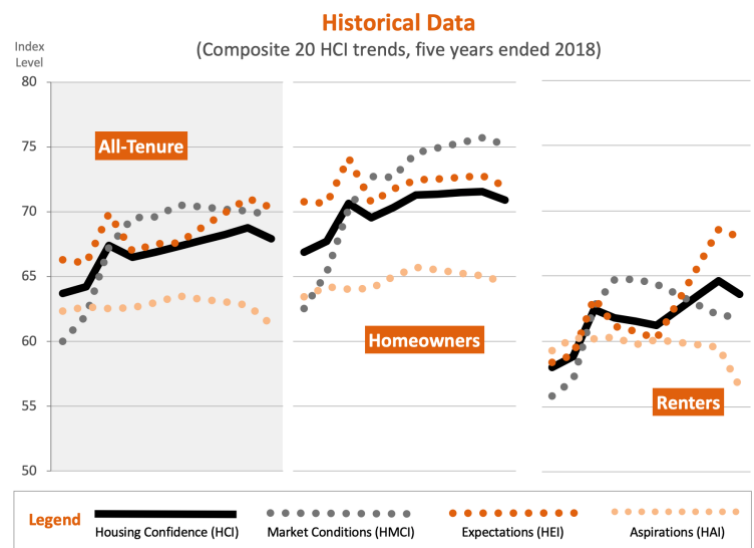
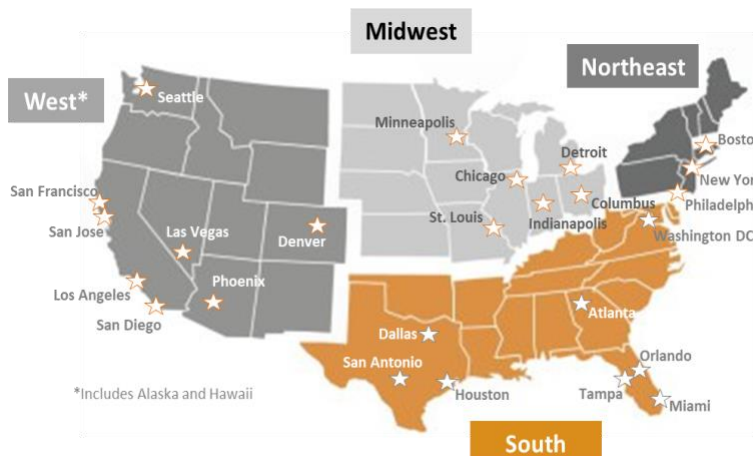
Index factors derived from U.S. Housing Confidence Survey respondent data include:

<b>INDEX FACTORS</b>	<p><b>Assessments of:</b></p> <ul style="list-style-type: none"> <li>• Current buying conditions in local market</li> <li>• Current selling conditions in local market</li> <li>• Current direction of home prices in local market</li> <li>• Local home values vs. inflation (past 12 mos)</li> </ul>	<ul style="list-style-type: none"> <li>• Expected direction of local home value changes, near-term and long-term</li> <li>• Expected pace of local home value changes, near-term and long-term</li> <li>• Affordability of homeownership in future</li> <li>• Financial value (owning vs. renting)</li> <li>• Investment value (homeownership)</li> </ul>	<p><b>Assessments of whether owning a home:</b></p> <ul style="list-style-type: none"> <li>• Provides more (or less) freedom vs. renting</li> <li>• Is necessary to live the American Dream, achieve social status</li> <li>• Homeownership mind share, future home-buying outlook</li> </ul>
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The HCI methodology document is available at [pulsenomics.com](http://pulsenomics.com)

## National, Region-specific, Metro-specific and Tenure-specific Coverage

- Pulsenomics calculates and maintains a total of 768 housing confidence index data series for residential real estate markets throughout the U.S.



More information concerning HCS and HCI, including the HCS questionnaire and HCI methodology, can be found online at [pulsenomics.com](http://pulsenomics.com)

<sup>2</sup> The NAHB Homebuilder Confidence Index, The Institute of Supply Management Purchasing Managers' Index, The Conference Board's Consumer Confidence Index, and The University of Michigan's Index of Consumer Sentiment are a few examples of U.S. economic series that are calculated using a weighted diffusion index method.