U.S. Housing Confidence™ Report

September 2016

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U.S. Housing Confidence Strengthens Mid-year

Confidence in the residential real estate market firmed further in July, reflecting somewhat stronger homeowner expectations, and the persistence and breadth of recent price gains in the U.S. housing market.

The July 2016 **Zillow® U.S. Housing Confidence™ Index** (ZHCI)[1] edged up 0.4 points to 67.3 from its previous reading in January (a reading over 50 indicates a confidence surplus; below 50, a deficit). Over the past two years, housing confidence has increased in 18 of the 20 metro areas tracked, with the headline composite index now 3.1 points higher than its July 2014 level.

- Of the 20 large metropolitan statistical areas (MSAs) that comprise ZHCI, overall housing confidence is now highest in Phoenix (70.8) and still lowest in St. Louis (63.5).
- Since January, housing confidence increased in 13 of the 20 metropolitan areas studied; it increased the most in Philadelphia (↑3.8, to 65.4), and fell the most in San Jose (↓3.4, to 67.1).

Housing Confidence

Headline Index Levels, Changes, and Rankings

US Composite	6-Mo Change	1-Year Change	2-Year Change
67.3	▲ 0.4	▲ 0.8	▲ 3.1

Metro Area	Index Level	6 Mo Change	July Rankings 2016	2015	2014
Phoenix	70.8	▲ 0.4	1	4	12
Denver	70.2	▲ 1.2	2	3	4
Seattle	69.9	▲ 0.6	3	2	2
Los Angeles	69.8	▼ -0.9	4	8	7
Miami	69.5	▲ 0.5	5	5	6
Washington DC	69.3	▲ 1.8	6	6	5
Dallas	68.3	▼ -1.4	7	10	13
Atlanta	68.2	▲ 1.0	8	11	9
San Diego	68.2	▼ -0.4	9	12	10
Boston	67.8	▼ -0.2	10	13	8
Minneapolis	67.7	▲ 1.2	11	15	11
Las Vegas	67.5	▲ 0.6	12	9	15
Tampa	67.3	▲ 1.8	13	14	16
Detroit	67.2	▲ 1.3	14	18	14
San Jose	67.1	▼ -3.4	15	1	3
San Francisco	67.1	▼ -0.8	16	7	1
Chicago	65.9	▲ 1.3	17	16	19
Philadelphia	65.4	▲ 3.8	18	19	20
New York	64.1	▼ -0.5	19	17	17
St. Louis	63.5	▲ 3.2	20	20	18

[1] Zillow® is a registered trademark of Zillow Group (NASDAQ: Z). The Housing Confidence™Index, The Housing Confidence™Survey ("HCS"), and Pulsenomics® are trademarks of Pulsenomics LLC. The field period for the July 2016 edition of HCS was July 6th through July 14th.

About The Zillow Housing Confidence™ Index (ZHCI)

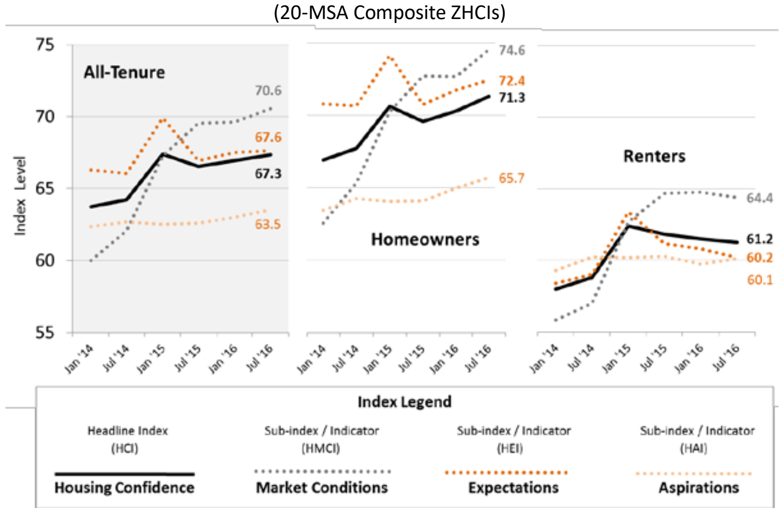
- ZHCI is calculated by Pulsenomics LLC, and derived from data collected in the biannual U.S. Housing Confidence™ Survey (HCS).
- Each edition of HCS is administered to 10,000 heads of household (500 within each of 20 of the country's largest metropolitan areas).
- From all completed survey questionnaires, Pulsenomics compiles, analyzes, and summarizes more than 350,000 consumer responses.
- ZHCI is computed using a weighted diffusion index methodology. Leading U.S. economic survey data are commonly summarized using this approach.
- ZHCI values are measured on a 0-100 scale; index values exceeding 50 are positive, and indicate a *surplus of confidence;* index values equal to 50 are neutral; index values less than 50 are negative, and indicate a *deficit of confidence.*
- A fact sheet containing further information about HCS and ZHCI appears on page 17 of this document. More detailed information is available online at pulsenomics.com and zillow.com/research/

Housing Confidence Indicators (Sub-Indexes)

Analysis of the sub-indices underlying the headline ZHCI reveals the drivers of housing confidence changes over time. The below plots illustrate the distinct paths of the housing confidence indicators, and the magnitude of the gap in housing sentiment between homeowners and renters.

Time Series: Headline Housing Confidence Index and Indicators

(20-MSA Composite ZHCIs)



- Each of the three all-tenure sub-indices rose from their January levels. A more upbeat assessment by homeowners of prevailing market dynamics pushed the all-tenure Housing Market Conditions sub-index to a record-high level. Overall, assessments by households of current housing market conditions remain more upbeat than their outlooks for the future.

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- A comparison of ZHCIs by tenure type shows that the confidence gap between homeowners and renters widened, as homeowner confidence rose (↑1.0) while renter confidence edged down (↓0.3) in July.
- The all-tenure Housing Market Conditions sub-index increased from its January level in the majority (15) of the 20 metro areas measured, driven by confident homeowner households.[2] One-year and two-year changes in the all-tenure sub-indices are summarized by metro area in the table below.

Housing Confidence Sub-Indices (All-Tenure)

July 2016 Index Levels and Point Changes

HCI (Headline Index)		
Housing Confidence		
	1 Yr Chg	2 Yr Chg
67.3	▲0.8	▲3.1

Sub-Indices	HMCI (25% weight) Housing Market Conditions			HEI (50% weight) Housing Expectations			HAI (25% weight) Homeownership Aspirations		
	Index Level	1 Yr Chg	2 Yr Chg	Index Level	1 Yr Chg	2 Yr Chg	Index Level	1 Yr Chg	2 Yr Chg
US Composite	**70.6**	▲1.1	▲8.5	**67.6**	▲0.6	▲1.5	**63.5**	▲0.9	▲0.8
Atlanta	**70.6**	▲2.3	▲9.0	**69.5**	▲3.4	▲2.1	**63.2**	▼-4.0	▼-1.3
Boston	**73.8**	▲0.5	▲7.3	**69.8**	▲2.7	▲2.4	**57.8**	▲0.4	▼-2.9
Chicago	**66.4**	▲1.3	▲12.4	**66.3**	▲0.1	▲4.3	**64.6**	▲1.6	▲2.6
Dallas	**72.5**	▼-0.1	▲8.6	**67.9**	▲0.3	▲3.2	**64.8**	▲1.9	▲1.6
Denver	**76.6**	▼-1.3	▲5.0	**70.0**	▼-0.6	▲1.4	**64.2**	▲1.9	▲4.7
Detroit	**71.8**	▲3.1	▲10.8	**66.8**	▲4.0	▲1.3	**63.2**	▲2.6	▼-0.7
Las Vegas	**72.1**	▲1.9	▲9.9	**66.8**	▼-1.3	▲1.7	**64.2**	▼-2.1	▲2.8
Los Angeles	**72.8**	▲1.8	▲8.3	**69.2**	▼-0.1	▲0.7	**68.0**	▲4.3	▲3.6
Miami	**72.2**	▲0.3	▲7.4	**68.8**	▼-0.9	▼-0.2	**68.2**	▲1.2	▲4.9
Minneapolis	**74.9**	▲1.1	▲7.5	**68.3**	▲2.9	▲1.1	**59.4**	▲0.3	▲0.9
New York	**66.7**	▲1.9	▲8.3	**63.7**	▬0.0	▲0.1	**62.2**	▼-0.7	▼-2.6
Philadelphia	**65.7**	▲2.8	▲11.6	**66.4**	▲3.1	▲4.5	**63.0**	▲3.4	▲2.2
Phoenix	**72.5**	▼-1.3	▲9.5	**72.5**	▲2.6	▲7.4	**65.7**	▲1.2	▲2.1
St. Louis	**66.2**	▲4.6	▲11.0	**63.0**	▲0.7	▼-0.7	**61.9**	▲2.7	▲1.4
San Diego	**71.0**	▲0.8	▲5.8	**69.9**	▲1.4	▲3.0	**62.0**	▲1.4	▲0.4
San Francisco	**71.4**	▼-3.8	▼-0.1	**68.0**	▼-1.3	▼-2.4	**60.9**	▲0.1	▲0.5
San Jose	**73.2**	▼-1.2	▲4.0	**66.2**	▼-7.7	▼-3.1	**62.8**	▼-3.0	▲1.2
Seattle	**76.5**	▼-0.2	▲8.5	**71.0**	▼-1.2	▲0.6	**61.1**	▼-0.5	▲0.1
Tampa	**72.8**	▲3.3	▲12.6	**68.1**	▲0.4	▲1.4	**60.0**	▬0.0	▲0.5
Washington DC	**71.5**	▼-2.0	▲6.3	**70.6**	▲1.2	▲1.0	**64.6**	▲0.7	▲1.2

- Of the 60 all-tenure housing confidence sub-indices (three for each of 20 metro areas) that underlie the headline U.S. Composite ZHCI, in July, well over one-half of them (37) increased from their year-ago levels, and the vast majority of them are at higher levels than they were in July 2014. Here's a summary of one-year and two-year changes in the sub-indices of all 20 cities, *by tenure category*:

Homeowners:

- ✓ 42 (70 percent) of the indicators increased vs. July 2015
- ✓ 48 (80 percent) of the indicators increased vs. July 2014

Renters:

- ✓ 29 (48 percent) of the indicators increased vs. July 2015
- ✓ 40 (67 percent) of the indicators increased vs. July 2014

Additional analyses of housing confidence by tenure category appear on pages 13 and 14 of this report.

Housing Market Conditions Indicator (HMCI)

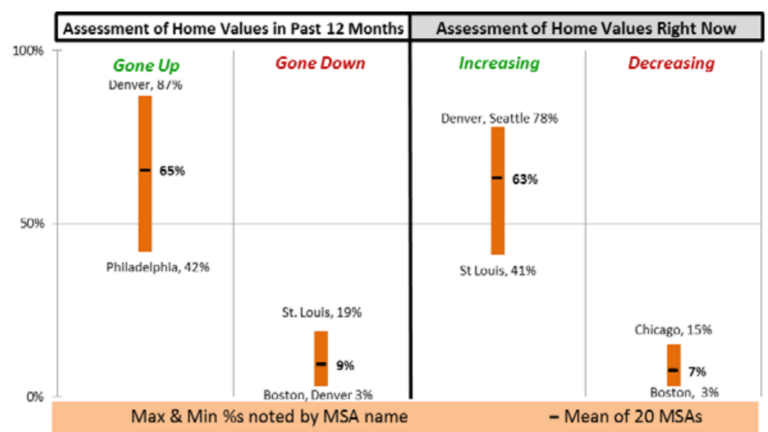
The U.S. Composite HMCI has improved considerably over the past two years (↑8.5 since July 2014, to 70.6), reflecting the persistence and breadth of the U.S. housing recovery. This indicator of housing confidence is higher now than it was two years ago in all but one of the 20 metro areas (it is marginally lower in **San Francisco**), and the 20-metro composite is up by a significantly greater margin than the other two sub-indices over the same period.

- Households in **Denver** have the strongest overall assessment of prevailing local housing market conditions (HMCI: 76.6).
- Of all the metro areas that comprise ZHCI, this sub-index improved the most in **St. Louis** over the past year (↑5.2 since January, and ↑4.6 YoY).
- Although market assessments by homeowners and renters in Philadelphia turned more upbeat in July, this pop in optimism still leaves the city with the lowest overall HMCI reading of all 20 cities.
- The HMCI for **Phoenix** fell the most since January (↓6.5), although it remains at a healthy level. This housing confidence indicator also has fallen by more than two points this year in both **Dallas** and **San Diego**; in each case, however, the HMCI sub-index still sits at above-average levels.

Further analyses of respondent-level data from the July 2016 U.S. Housing Confidence Survey reveal some of the factors that have boosted the HMCI sub-index higher from levels of prior years:

- 65 percent of all households said that *local home values have increased over the previous 12 months*, up from 63 percent and 59 percent who said so a year ago and two years ago, respectively.
- 63 percent of all households said that *local home values are increasing now*, up from 61 percent and 58 percent who said so a year ago and two years ago, respectively.

Direction of Home Values, Past & Present (% of All Households)
(Note: "flat/no change" responses are omitted from this display)



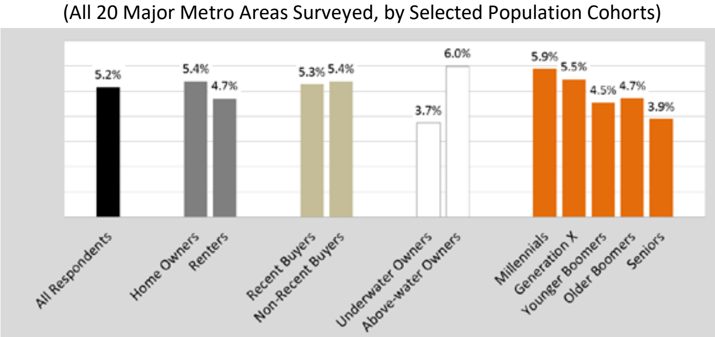
Source: Pulsenomics, July 2016 U.S. Housing Confidence Survey of 10,000 households (500 adults in each of 20 MSAs)
Margin of error: Mean/Composite of 20 MSAs: +/-1.2% Individual MSAs: Varies from +/-4.0% to +/- 4.5%

[2] The composite indices are weighted by the number of housing units within each metro area. Thus, larger cities with more households have greater weighting within the composite measures than smaller cities.

Housing Market Conditions Indicator (HMCI) (cont'd)

- In July, the average estimate from the 10,000 HCS respondents of the local home value appreciation rate over the prior 12 months was 5.2 percent, lower than the 7.2 percent actual average rate recorded by Zillow over the same period for the same 20 cities.[3] The following chart reveals significant variances in the assessments of recent housing market performance among age groups and home equity cohorts.

Assessment of Home Value Change, For 12-mos Ended June 2016
(All 20 Major Metro Areas Surveyed, by Selected Population Cohorts)

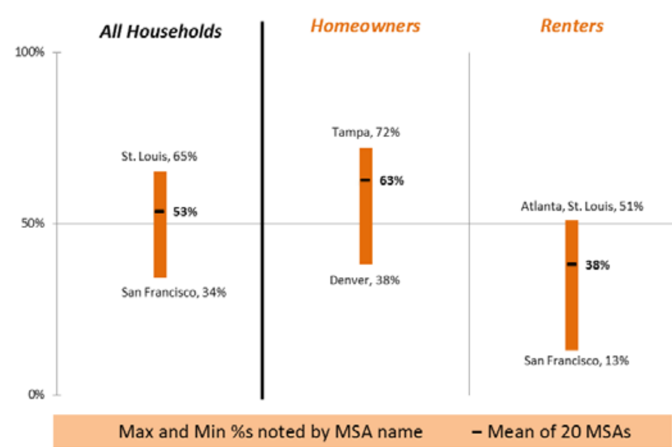


Source: July 2016 U.S. Housing Confidence Survey

The next chart shows that the majority (53 percent) of all HCS respondents believe that **now is a good time to buy a home** (down from 57 percent one year ago), but views vary considerably according to tenure and geography.

- Fewer than four in ten (38 percent) of all renter households surveyed in July said that now is a good time to buy a home–a record low–while more than six in ten (63 percent) of all homeowner households said so.
- Households in pricey California metro areas continue to indicate that now is *not* a good time to buy a home: the least enthusiastic prospective home buyers are concentrated in The Golden State, where less than one-third of renters in each of the four California metro areas surveyed said that now is a good time to buy a home. In **San Francisco**, a mere 13 percent of renter households believe that now is a good time to take the homeownership plunge there.

"Now is a Good Time to Buy a Home" (% of Households that agree)

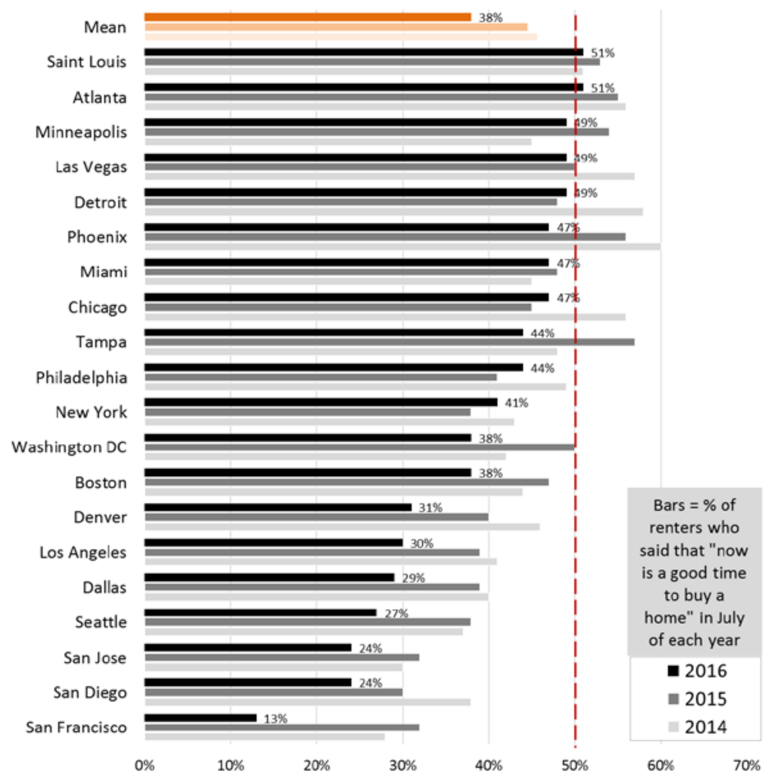


Source: Pulsenomics, July 2016 U.S. Housing Confidence Survey of 10,000 households (500 adults in each of 20 MSAs)
Margin of error: Mean/Composite of 20 MSAs: +/-1.2% (All-Tenure); +/-1.5% (Homeowners); +/-2.0% (Renters)
Individual MSAs: +/-4.0% to +/- 4.5% (All-Tenure); +/-5.2% to +/-6.1% (Homeowners); +/-6.3% to +/-8.3% (Renters)

[3] As of this writing, for the 12-month period ended June 2016, the U.S. Zillow Home Value Index and the S&P/Case-Shiller U.S. National Home Price Index indicate home value appreciation of 5.4% and 5.1%, respectively.

- Just over one-half of renters in **St. Louis** and **Atlanta** said that now is a good time to buy a home–the only two cities among those surveyed where a majority of renters said this. In six metro areas, three in ten or fewer renter households said that now is a good time to buy; two years ago (July 2014), there was only one metro area where there was such a downbeat view of home buying sentiment among renters.
- Within the individual metro areas surveyed, some striking contrasts were discovered between household (tenure) categories, e.g.:
  - ✓ In **San Francisco**, more than one-half (52 percent) of *homeowners* said that now is a good time to buy a home in July, while only 13 percent of *renters* said so; this sentiment gap between tenure categories also exceeds thirty percentage points in **Dallas, Los Angeles, San Diego and Seattle**.
  - ✓ This home-buying sentiment gap was smallest in **Denver**, where 38 percent of *homeowner* households said that now is a good time to buy, while 31 percent of *renter* households said so.

"Now is a Good Time to Buy a Home"
(% of Renter Households that agree, by MSA)

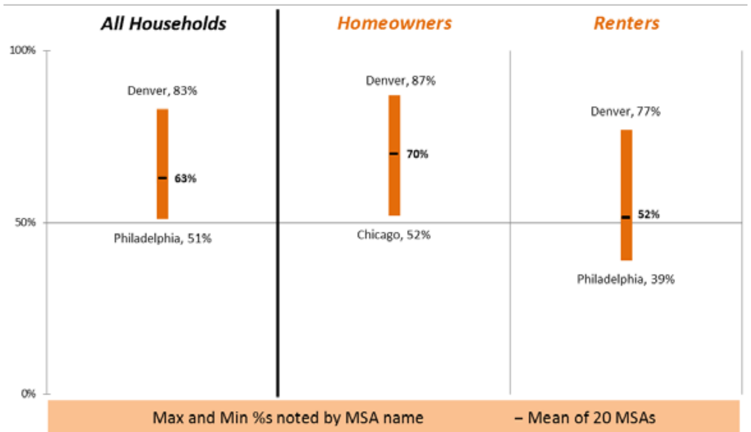


Source: Pulsenomics July 2016 US Housing Confidence Survey of 10,000 households, including 3,762 renters.
Margin of error: Mean/Composite of 20 MSAs: +/-1.2% (All-Tenure); +/-1.5% (Homeowners); +/-2.0% (Renters)
Individual MSAs: +/-4.0% to +/- 4.5% (All-Tenure); +/-5.2% to +/-6.1% (Homeowners); +/-6.3% to +/-8.3% (Renters)

- Home *selling* sentiment, meanwhile, is clearly trending in the other direction:
  - ✓ In July, a majority of homeowner households in all 20 metro areas surveyed said that now is a good time to sell a home.
  - ✓ Compared to one year ago, the percentage of homeowner households who said that now is a good time to sell increased in every metro area except **Dallas** and **San Francisco** (although selling sentiment in these two cities remains higher than the 20-metro average).

Housing Market Conditions Indicator (HMCI) (cont'd)

"Now is a Good Time to Sell a Home" (% of Households that agree)



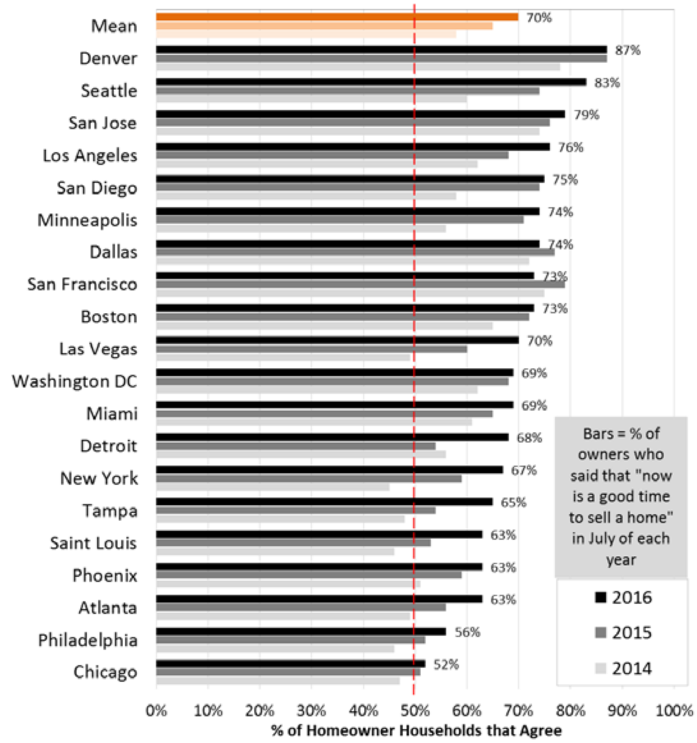
Source: Pulsenomics, July 2016 U.S. Housing Confidence Survey of 10,000 households (500 adults in each of 20 MSAs)
Margin of error: Mean/Composite of 20 MSAs: +/-1.2% (All-Tenure); +/-1.5% (Homeowners); +/-2.0% (Renters)
Individual MSAs: +/-4.0% to +/- 4.5% (All-Tenure); +/-5.2% to +/-6.1% (Homeowners); +/-6.3% to +/-8.3% (Renters)

- The number of **Denver homeowners** who said in July that now is a good time to sell a home reached 87 percent, equaling the reading from one year ago, and the highest degree of selling sentiment recorded in any city since the inception of the U.S. Housing Confidence Survey in 2014.
- The largest year-over-year increase in the number of homeowners who said that now is a good time to sell a home was recorded by **Detroit** residents: In July, 68 percent said it's a good time to sell–a 26 percent increase from one year earlier, when only a small majority (54 percent) of **Detroit homeowners** said so.
- As much as existing homeowners may wish to trade-up or relocate, there are still at least six million of them for whom economic reality prevents them from planting a "For Sale" sign on the front lawn.[4]
- All ten metro areas with a below-average number of homeowners who said that *"now is a good time to sell a home"* have higher-than-average percentages of mortgagors who are underwater.[5]

	Homeowners GTTS*	Negative Equity**
Mean of All 20 Metros	**70%**	**10.6%**
Washington	69%	14.2%
Miami	69%	11.8%
Detroit	68%	14.0%
New York	67%	11.0%
Tampa	65%	12.1%
St. Louis	63%	14.7%
Atlanta	63%	14.7%
Phoenix	63%	12.6%
Philadelphia	56%	14.2%
Chicago	52%	19.0%

* The percentage of homeowner households who said that, where they live, *"now is a good time to sell a home"* in the July 2016 U.S. Housing Confidence Survey.
** Negative equity percent of homes with a mortgage, from the Q2 2016 Zillow Negative Equity Report.

"Now is a Good Time to Sell a Home"
(% of *Homeowner* Households that agree, by MSA)

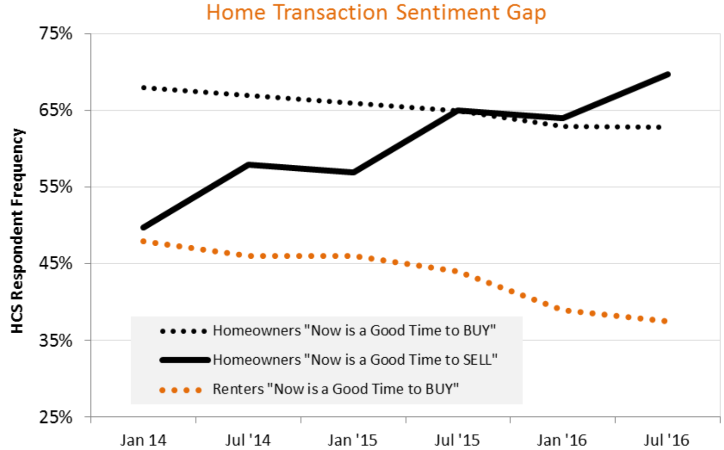


Source: Pulsenomics US Housing Confidence Survey of 10,000 households, including 6,238 homeowners
Margin of error: Mean/Composite of 20 MSAs: +/-1.5% Individual MSAs: +/-5.2% to +/-6.1%

Disproportionate numbers of renters are experiencing below-average wage growth and have meager savings (and/or burdensome debt levels, i.e., unpaid student loans and credit card balances). These financial capacity limitations--along with a dwindling inventory of affordable single family homes--are weighing-down renter confidence in the housing market, and contributing to a wider gap in "home transaction sentiment".

- The preceding charts reveal a growing imbalance that warrants monitoring. To re-cap, a record-high number–70 percent–of homeowner households surveyed said "now is a good time to *sell* a home"; at the same time, record-low numbers of renter households surveyed–38 percent–believe that "now is a good time to *buy* a home".

Home Transaction Sentiment Gap

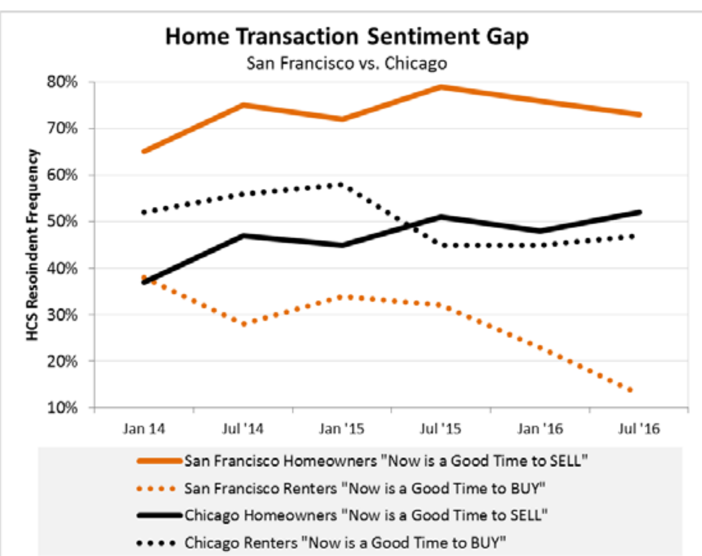


[4] "*Six Ways to Explain Low Inventory*", REALTOR® Mag, March 26, 2016 and "*Negative Equity Continues to Weigh Down Housing Markets, Limiting New Inventory*", Zillow, March 9, 2016.

[5] "Underwater" status derived from The Zillow Q2 2016 Negative Equity Report.

Housing Market Conditions Indicator (HMCI) (cont'd)

- A transaction sentiment gap is consistent with a strong and persistent seller's market: expectations for more home value gains embolden homeowners, some of whom try to ride-out value appreciation waves and "time the market" if they are contemplating a transaction. But the gap is growing, as financial capacity limitations and a dwindling inventory of affordable single family homes are leaving record numbers of renters discouraged about the prospect of taking the homeownership plunge. Unfortunately for them, owners' upbeat assessments of selling conditions are not translating into increased listed inventory--especially in the entry-level segment of the marketplace, where negative equity remains elevated and continues to contribute to dampened transaction volume. Given the relative dearth of home listings, the selling sentiment being expressed by homeowners may be revealing at least as much about their swagger as it is telegraphing their near-term intentions.
- Currently, the home transaction sentiment gap is widest in **San Francisco**, and narrowest in **Chicago**.
  - ✓ About three-quarters of San Francisco homeowners (73 percent) said that *"now is a good time to sell a home"* in July, while just 13 percent of renters there said that *"now is a good time to buy a home."* This gap has contributed to diminished housing confidence in San Fran since 2014 (according to The July 2016 The Zillow Housing Confidence Index, the only other metro area where residents have *lower* housing confidence today than they did two years ago is San Jose).
  - ✓ Conditions in Chicago confirm that a *narrow* transaction sentiment gap is not a reliable indicator of market health or normalcy. Just over one-half (52 percent) of homeowners there say that *"now is a good time to sell a home"*-- the weakest such sentiment recorded of the 20 metro areas studied. No doubt, The Windy City's 19 percent overall negative equity rate--the highest among the 20 cities surveyed--is a significant factor in depressing would-be home sellers. Unfortunately for Chicago renters, current owners of entry-level homes there are even less likely to list their properties any time soon: a whopping 33 percent of them remain underwater.



Housing Expectations Indicator (HEI)

The U.S. Composite HEI is now 67.6, up slightly from its 67.5 level in January. Compared to one year ago (July 2015), it is only 0.6 points higher.

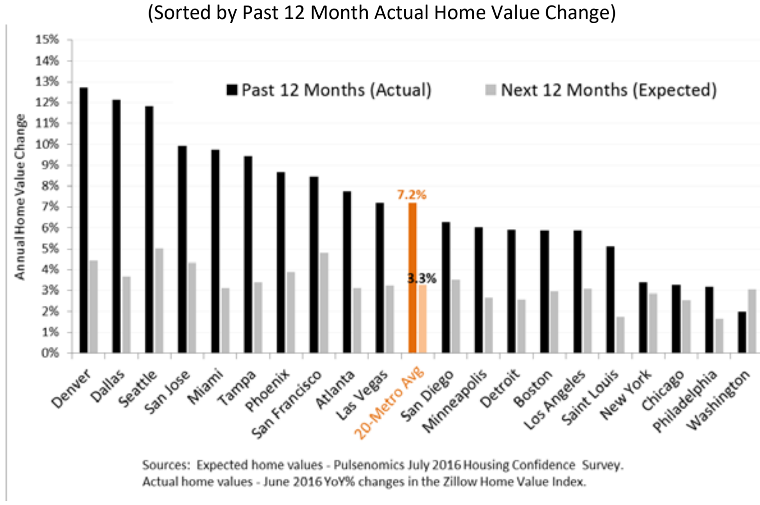
- Year-over-year, **Detroit** posted the largest HEI increase (HEI: 66.8,↑4.0), while **San Jose** had the largest HEI decline (HEI: 66.2, ↓7.7). Expectations among *renters* in Silicon Valley have been especially hard-hit (HEI: 58.2, ↓11.6 YoY).
- The largest two-year HEI increase was recorded in **Phoenix** (HEI: 72.5,↑7.4), while the largest drop was, once again, in **San Jose** (HEI: 66.2, ↓3.1).
- Of the three housing confidence sub-indices, the HEI continues to have the largest "tenure gap": housing expectations are consistently higher among homeowners compared to those of renters who live in the same metro area. Currently, the largest gap is in **Seattle** (20.6 index points), and the smallest is in **Chicago** (less than 4.9 index points).
- Housing expectations (all-tenure) are now highest in **Phoenix** (HEI: 72.5, ↑3.3 since January).
- After falling precipitously during the second-half of last year to an index level marginally above a negative reading, housing market expectations of **St. Louis renters** recovered a bit in July (HEI: 53.7, ↑2.5).[6]

Home Value Expectations

The HCS questionnaire includes several questions regarding expectations for near-term and long-term changes in home values within the local market where each respondent resides. These expectations are important factors in determining the strength of housing confidence.

Past 12 Month Actual vs. Next 12 Month Expected Home Value Changes

(Sorted by Past 12 Month Actual Home Value Change)



Real estate is a notoriously inefficient asset class, and one symptom of market inefficiency is price inertia. However, the chart above–a comparison of actual home value changes in the recent past to those expected by heads of household in the near future–may be suggesting that, after the bust, consumers are more inclined to significantly discount price momentum when formulating their expectations concerning future home values.

[6] Index readings above 50 indicate positive expectations; those below 50 indicate negative expectations.

Housing Expectations Indicator (HEI) (cont'd)

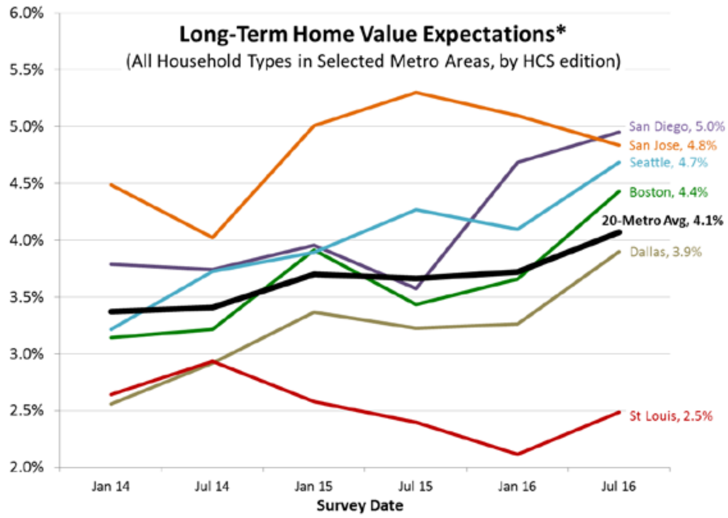
- Across all surveyed markets, expected home value appreciation for the coming 12-month period is 3.3 percent, which is less than one-half the actual annual rate recorded for the year-ended June 2016.
- Heads of household in only one of the 20 metro areas surveyed–**Washington DC**–believe that local home value appreciation in the next 12 months will exceed the rate actually recorded during the 12 months-ended June 2016.
- A large majority (16) of the 20 cities surveyed experienced appreciation rates greater than five percent over the 12-month period ended June 2016. With the exception of **Seattle** residents–who expect home value appreciation of exactly five percent in the coming 12-month period–residents of all cities expect home values to increase at a less than 5 percent rate during the next 12 months.

The following table provides a snapshot of home value expectations in July 2016. It reveals divergence between short-term and long-term home value expectations, and variances by population cohort.

Home Value Change Expectations By Cohort and Time Horizon

	20 Metro Areas *Mean of Responses*	Expectations (Percent) Next 12 Months	Avg Annual Next 10 Years
	All Households	3.29	4.07
TENURE	Homeowners	3.32	4.32
	Renters	3.23	3.51
BUYER PROFILE	Recent Buyers	3.65	4.82
	Non-Recent Buyers	3.26	4.14
	First-Time Buyers	3.67	4.97
	Not First-Time Buyers	3.09	3.61
HOME EQUITY	Underwater Owners	2.48	3.45
	Above-water Owners	3.39	4.47
AGE	All Millennials	3.94	4.95
	Generation X	3.47	4.32
	Younger Boomers	2.77	3.29
	Older Boomers	3.00	3.20
	Seniors	2.48	2.65

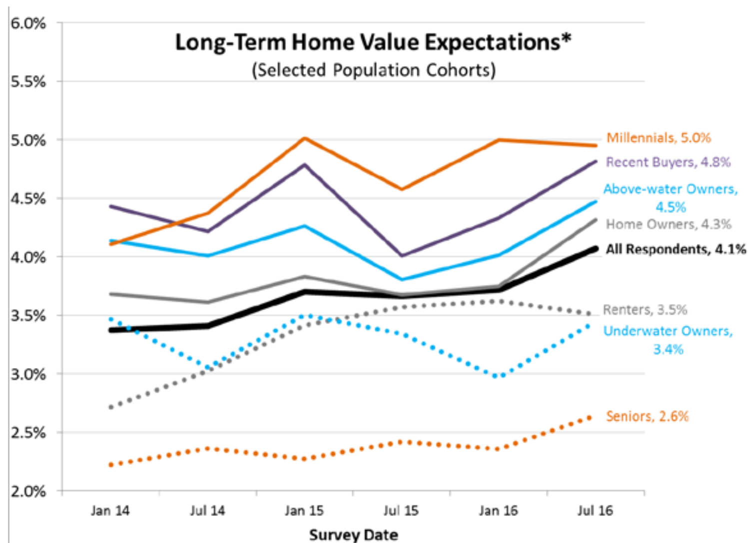
- In contrast to moderating home value projections among [market experts and professional forecasters], overall, *consumer* expectations for home value growth in both the near-term and long-term have reached their highest levels since HCS research began in 2014.
- In all metro areas except **Denver** and **Seattle**, households currently think that home value appreciation in their respective metro areas during the coming 12 months will be lower than the annual average over the coming decade. The following chart shows trends in long-term home value expectations among heads of household in selected metropolitan areas. Since the January 2014 inception of the U.S. Housing Confidence Survey, overall, these long-term expectations have been trending mostly upward, but there are considerable variations by city.



*Average annual rate of home value appreciation expected over the next 10 years.
n = 500 for each metro area n = 10,000 for 20-Metro Avg

The below plot and preceding table reveal consistent patterns in the home value expectations of population cohorts across all 20 metro areas:

- Homeowners tend to have higher home value expectations than renters.
- Recent home buyers and first-time buyers are typically the most optimistic population segments concerning future home values.
- Underwater homeowners are less optimistic about the rate of future home value appreciation than above-water homeowners.
- Among the generation cohorts, millennials and seniors tend to be the most and least optimistic, respectively, about future home value appreciation.



*Average annual rate of home value appreciation expected over the next 10 years.

The data in the following table provide insight regarding the relative strength of home value expectations and optimism for given population segments across the metro areas studied. For example, **millennials in Chicago** expect home values to increase by more than five percent through June 2017, while **millennials in St. Louis**–along with **seniors in both Chicago and St. Louis**–expect price increases of less than two percent over the same one-year period.

Housing Expectations Indicator (HEI) (cont'd)

Home Value Change Expectations for Next 12 Months

Rankings of All Households, Millennials and Seniors Cohorts

All Respondents			Millennials			Seniors		
Rank	Metro	Mean (%)	Rank	Metro	Mean (%)	Rank	Metro	Mean (%)
1	Seattle	5.04	1	San Francisco	6.25	1	Seattle	4.84
2	San Francisco	4.81	2	Dallas	5.16	2	San Jose	4.10
3	Denver	4.44	3	Chicago	5.05	3	San Francisco	3.30
4	San Jose	4.34	4	Seattle	4.80	4	Denver	3.07
5	Phoenix	3.90	5	Denver	4.64	5	Dallas	2.95
6	Dallas	3.67	6	Phoenix	4.61	6	Las Vegas	2.90
7	San Diego	3.54	7	Las Vegas	4.46	7	San Diego	2.61
8	Tampa	3.39	8	Detroit	4.38	8	Phoenix	2.59
9	Las Vegas	3.25	9	San Jose	4.33	9	Tampa	2.43
10	Atlanta	3.12	10	Miami	3.94	10	Washington DC	2.31
11	Miami	3.11	11	Los Angeles	3.73	11	Miami	2.30
12	Los Angeles	3.08	12	Boston	3.63	12	Los Angeles	2.27
13	Washington DC	3.05	13	Tampa	3.62	13	Atlanta	2.25
14	Boston	2.97	14	Atlanta	3.23	14	Minneapolis	1.95
15	New York	2.85	15	San Diego	3.21	15	Boston	1.94
16	Minneapolis	2.67	16	New York	3.21	16	New York	1.91
17	Detroit	2.58	17	Minneapolis	3.17	17	Detroit	1.70
18	Chicago	2.54	18	Washington DC	3.14	18	Chicago	1.67
19	St Louis	1.73	19	Philadelphia	2.27	19	Philadelphia	1.38
20	Philadelphia	1.65	20	St Louis	1.99	20	St Louis	1.19
20-Metro Average		3.29	20-Metro Average		3.94	20-Metro Average		2.48

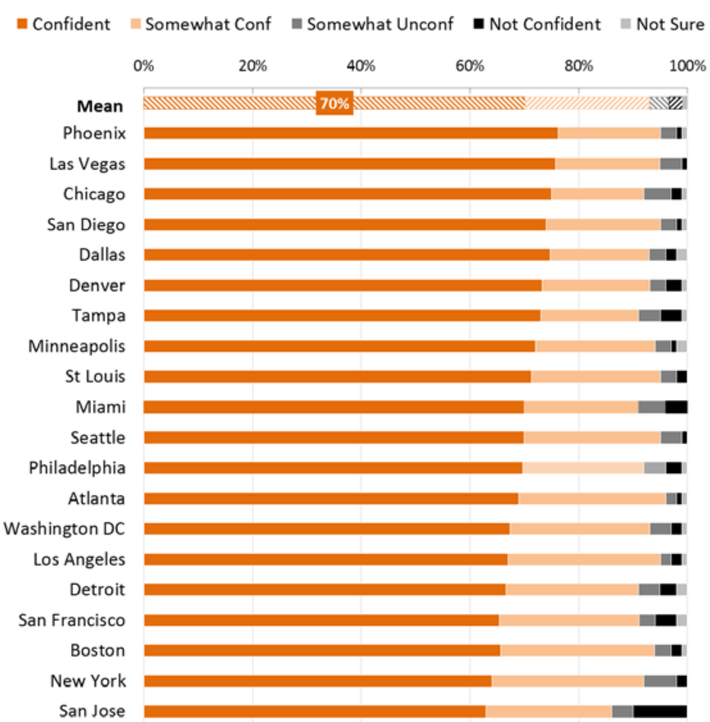
Source: July 2016 Pulsenomics LLC U.S. Housing Confidence Survey of 10,000 households

Homeownership Affordability Expectations

The HCS instrument includes several other questions pertaining to household expectations, including a few concerning the affordability of homeownership in the future.

Homeowners:

Will you be able to afford to stay in your home as long as you want?



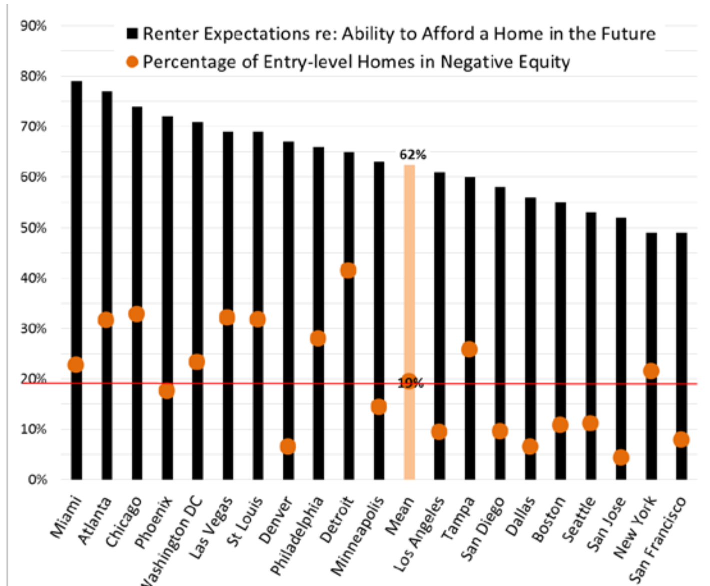
Source:
July 2016 U.S. Housing Confidence Survey of 10,000 households, including 6,238 homeowners.
Margin of error: Mean/Composite of 20 MSAs: +/-1.5% Individual MSAs: +/-5.2% to +/-6.1%

- In every metro area surveyed, the vast majority of homeowners continue to express a high degree of confidence in their ability to continue affording their home over the long term; overall, seven of every ten (70 percent) homeowners surveyed in July said they are confident that they will be able to afford to stay in their home as long as they want.
- Of homeowners who reside in one of the 20 cities surveyed, those in **Phoenix** expressed the greatest amount of confidence in their ability to continue affording homeownership (77 percent), which is up from just two-thirds (66 percent) of Phoenix homeowners two years ago (July 2014).
- **San Jose** residents are the least sanguine: the percentage of homeowners there who are "somewhat unconfident" or "not confident" that they will be able to afford to stay in their home over the long haul jumped to 14 percent in July–double the percentage recorded in July 2015.
- Although homeowners in the **New York** metro area still have relatively high affordability anxieties, their concerns have diminished by the largest degree over the past year; the percentage of homeowners in both **Atlanta** and **Las Vegas** who are "somewhat unconfident" or "not confident" is less than half than it was two years ago, in July 2014.
- A majority (62 percent) of all *renter* households surveyed in July said they are still "confident" or "somewhat confident" they'll be able to afford to own a home someday. This is down from two-thirds (66 percent) of renter households that said so two years ago, in July 2014.
- In **San Francisco** and **New York**, one-half (51 percent and 50 percent, respectively) of renter households are "not confident", "somewhat unconfident", or uncertain in their expectations re: the future affordability of homeownership. Also, the percentage of renters with these sentiments living in **Seattle, San Jose, and Boston** are approaching the 50 percent mark (48 percent, 47 percent, and 45 percent, respectively).

Renters:

Will you be able to afford to own a home someday?

% of Renter Households "Confident" or "Somewhat Confident"



Source: Pulsenomics July 2016 U.S. Housing Confidence Survey of 10,000 households, including 3,762 renter households
Margin of error: Mean/Composite of 20 MSAs: +/-2.0% Individual MSAs: +/-6.3% to +/-8.3%

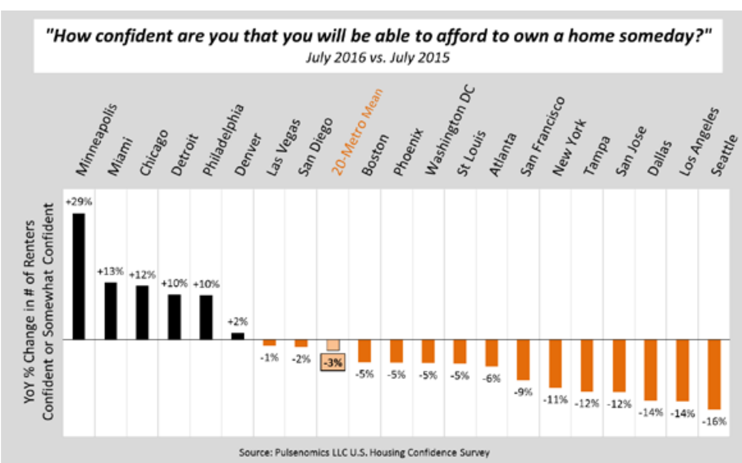
Entry-level home negative equity data represent the % of homes in each metro area's "bottom value tier" (i.e., the bottom-third by home value) with mortgage debts exceeding home value as of the end of Q2 2016, as calculated by Zillow. Inc.

Housing Expectations Indicator (HEI) (cont'd)

- Although the number of American homeowners with negative equity continues to fall steadily overall (to just over 12 percent nationally as of the end of Q2 2016), it is taking the owners of the least expensive one-third of the housing stock longer to recover from the bust (on average, over 19 percent of owners of these lower-priced homes have negative equity). In the majority of the metro areas with above-average homeownership affordability expectations among renters (eight of eleven), the percentage of entry-level homes that remain underwater is also above-average–including in **Detroit**, where the negative equity rate among owners of entry-level homes still exceeds 41 percent.
- Households who are currently renting in one of the eight markets alluded to above will face a significant challenge when they decide to take the homeownership plunge: the value appreciation needed to enable underwater owners in those metro areas to list their starter homes for sale will lower affordability, which could dampen aspiring renters' confidence, further delaying (if not derailing) their plans to buy a home.
- Presently, only a minority of renters in **New York** and **San Francisco**–49 percent in each metro area–are "confident" or "somewhat confident" in their ability to own a home someday, down from 64 percent and 58 percent, respectively, in July 2014.
- At least one-third of renters in 13 of the 20 metro areas surveyed in July were "not confident", "somewhat unconfident", or uncertain in their expectations re: the future affordability of homeownership.

The following chart shows the degree to which the expectations of renter households (concerning homeownership affordability) have shifted in each of the surveyed metro areas over the past year.

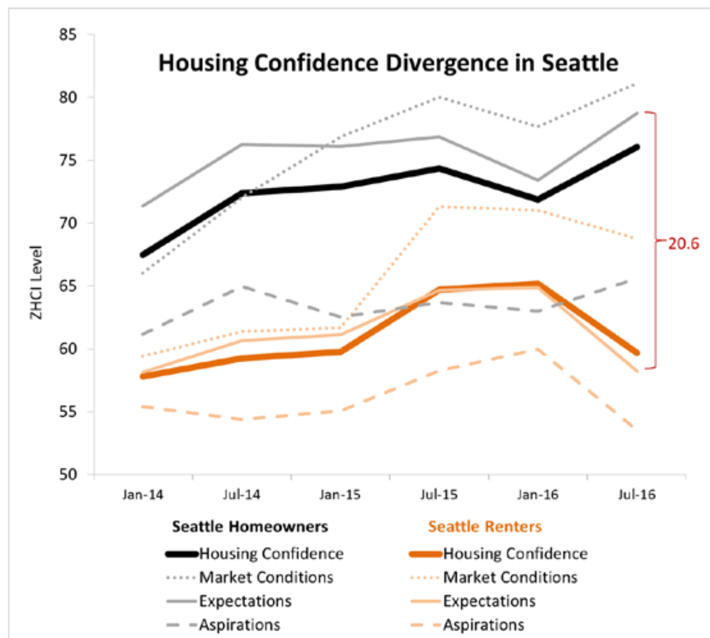
Renter Expectations re: Affordability of Homeownership in the Future
(July 2016 vs. July 2015)



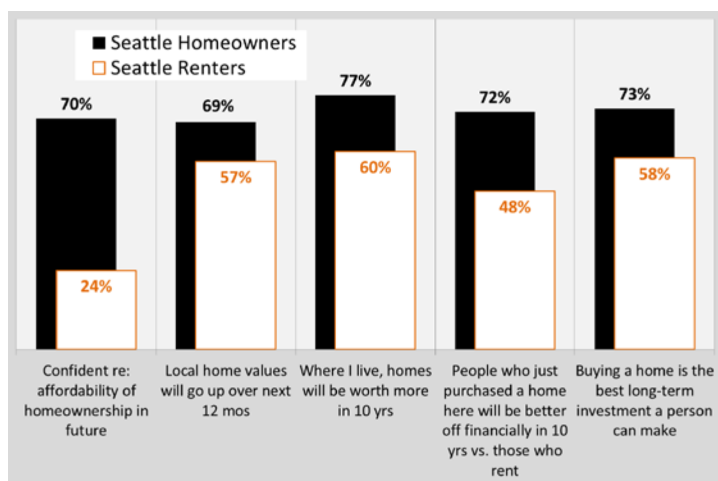
- Relative to renters in all other cities surveyed, those in **Minneapolis** had the biggest positive year-over-year change in optimism regarding affording a home in the future. Meanwhile, *pessimism* in this regard grew the most over the past year among renters in **Seattle**.
- In July 2016, compared to July 2014, 23 percent fewer renters in both the **Dallas** and **New York** metro areas said they were "confident" or "somewhat confident" that they will be able to afford a home someday, the largest two-year drop(s) in such renter sentiment among all metro areas surveyed.

Expectations: Driving the Confidence Gap

- Of the three U.S. composite ZHCI sub-indices, the largest gap between homeowners and renters (12.2 index points) appears in the HEI. Among the individual metro areas, the largest HEI tenure gap currently is in **Seattle** (more than 20 index points), and the smallest is in **Chicago** (less than 5 index points).
- A breakdown of the homeowner-renter gap in the **Seattle** ZHCI is displayed in the next line chart; the bar graph that follows it summarizes several indicators gathered from Seattle households in July that contribute to the 20.6-point gap in the HEI sub-index.
- Seattle renters' expectations are blunted by several factors; they are especially concerned about affordability of homeownership in the future.



Selected Drivers of Housing Expectations in Seattle
Homeowners vs. Renters



Homeownership Aspirations Indicator (HAI)

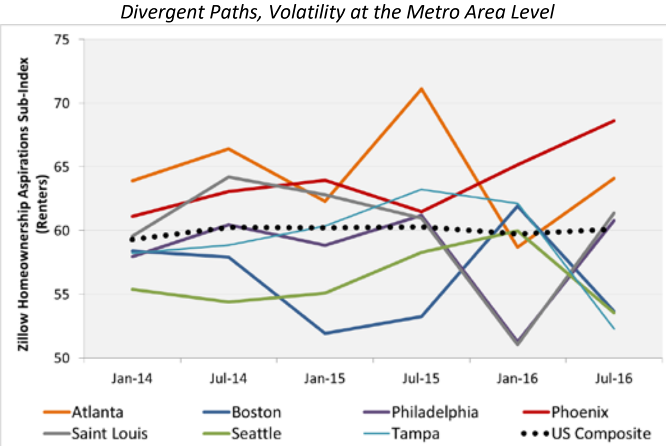
The U.S. Composite HAI is now 63.5, continuing to edge higher (↑0.5 since January, and ↑0.9 YoY). Among residents in the 20 metro areas surveyed, those in the **Miami** metro area still have the strongest aspirations for homeownership (all-tenure HAI: 68.2, ↑0.9 since January, and ↑1.2 YoY), while **Boston** households have the lowest (all-tenure HAI: 57.8,↓2.9 since January).

Since inception, relative to the two other housing confidence sub-indexes, the composite HAI has been stable, with all readings locked in the 62 to 63 range. However, HAI has been volatile for several individual metro areas–especially among renter households.

- For example, the Renter HAI plummeted more than 8 points in **Boston** and **Tampa** since the previous reading in January, while it soared more than 9 points in **Philadelphia** and **St. Louis** over the same period.

Renters' Homeownership Aspirations

Divergent Paths, Volatility at the Metro Area Level



Here are some of the data that drove the Renter HAI higher for St. Louis and Philadelphia:

St. Louis (Renter HAI 61.4, ↑10.3):

- The severe storms and flooding that ripped through St. Louis last December and early January might have had a temporary psychological impact on many of the renters there who responded to the previous edition of our survey.[7]
- While entry-level home values in St. Louis appreciated in the year-ended June 2016, they did so at a relatively modest rate: 4.3 percent (the June 2016 year-over-year 20-metro area average home value appreciation rate for entry-level homes was 8.8 percent). Also, in July:
  - ✓ More than seven in ten St. Louis renters (71 percent) said that they are determined to own a home someday, or think about homeownership "a lot"; in January, less than one-half (46 percent) of St. Louis renters said so.
  - ✓ More than two-thirds (68 percent) of renters said they expect to buy a home within the next five years, up from less than one-half (44 percent) who said so six months earlier.
  - ✓ Six in ten of St. Louis renters (60 percent) said that owning a home provides a person more freedom than renting, up from 52 percent who said so in January.

Philadelphia (Renter HAI 60.8, ↑9.5):

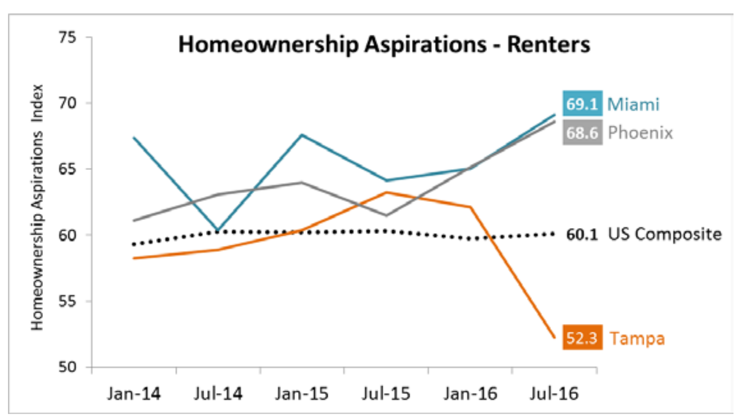
- Entry-level home values in Philadelphia have also been appreciating, but at an even more modest rate (3.0 percent) than those in St. Louis.
- The 3 percent year-over-year decline in Philly's entry-level home inventory is less than one-half the 8.3 percent YoY% decline in entry-level home inventory nationally.
- In July, more than half of Philadelphia renters (53 percent) said that they are determined to own a home someday, up from 39 percent who said so in January.
- 62 percent of renters said they expect to buy a home within the next five years, up from 46 percent who said so in January.
- In July, more than one-half (58 percent) of Philly renters said that owning a home is necessary to live The Good Life and The American Dream; less than one-half (41 percent) said so in January.

After its July plunge, the Renter HAI in **Tampa** is now the lowest of all 20 metros, having fallen almost 11 points during the past year to the 52.3 level. With entry-level home inventory in Tampa more than 21% lower than a year ago, and starter home values up 12.3% year-over-year as of June 2016, Tampa renters have become less enthusiastic about their prospects for homeownership.[8]

Here are some of the relevant attitudinal changes that drove down the Renter HAI level for Tampa since just the start of the year. In July, the number of Tampa renters who said:

- ✓ *"Owning a home is necessary to be a respected member of society"* fell by 47 percent from January.
- ✓ *"Owning a home provides a person more freedom than renting"* decreased by 13 percent.
- ✓ They are determined to own a home, or think a lot about owning a home, declined by 12 percent.
- ✓ They plan to buy a home within the next five years fell by 14 percent.

In contrast, the mood among **Phoenix renter households** has been improving, with the city's Renter HAI up more than 7 points over the past year (Renter HAI 68.6, ↑7.1 YoY). Of the 20 metro areas surveyed, this is the largest one-year increase recorded for this sub-index, leaving Phoenix renters with the near-strongest homeownership aspirations in the country, second to only those in **Miami**.



[7] U.S. Housing Confidence Survey was fielded January 6th – 14th. The storms and flooding in St. Louis resulted in a federal disaster declaration in several counties.

[8] According to data from Zillow Research, of the 20 metro areas surveyed by Pulsenomics, year-over-year entry-level home inventory fell more than 20 percent in three other metro areas, Boston, Dallas, and Seattle. Along with Tampa, these four cities now have the four lowest-ranked Renter HAIs.

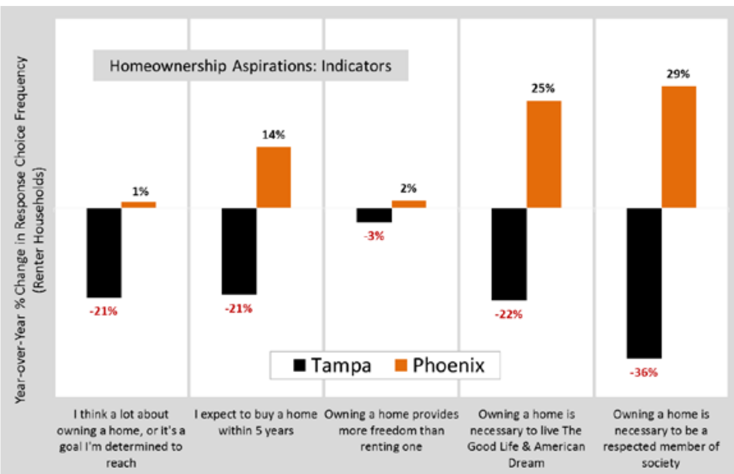
Homeownership Aspirations Indicator (HAI) (cont'd)

- Although home values are up 8.7% through the year ended June in the Valley of the Sun, **Phoenix renters** have reason for optimism as homes are still relatively affordable there. According to HSH, a homebuyer needs to earn less than $45,000 a year to afford the monthly payments on a median-priced Valley house.
- Would-be first-time homeowners in Phoenix also have more homes to choose from compared a year ago–listed entry-level inventory is up more than 11 percent year-over-year–by far, the largest such increase among the 20 metro areas that comprise HCS (on average, entry-level home inventory is *down* 10.7 percent across all 20 cities).

The five key factors that have driven the divergent paths of renters' homeownership aspirations in **Tampa** and **Phoenix** over the past year are summarized in the chart below.

Tampa and Phoenix: A Tale of Two Cities

Change in Response Choice Frequency Among Renter Households
July 2016 vs. July 2015



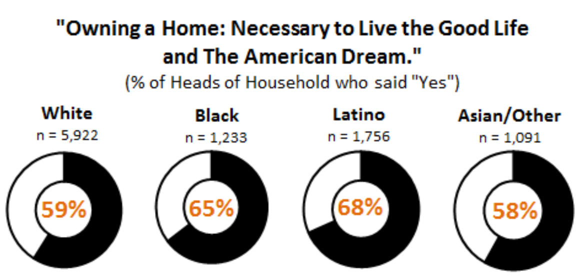
Source: The U.S. Housing Confidence Survey

The last table on page 14 summarizes the changes in Renter HAI rankings over time for all 20 metro areas that comprise ZHCI.

Social Status, Freedom, and The American Dream

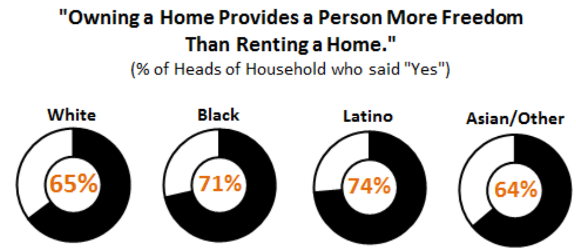
In addition to geographical differences, homeownership aspirations vary by tenure and demographic characteristics. Members of ethnic and racial minority groups have especially vibrant, strengthening homeownership aspirations. For example:

- **Latino and Black heads of household** continue to express relatively strong homeownership aspirations overall. Data from one of several HAI indicators are displayed in the following sets of pie charts.



Source: July 2016 U.S. Housing Confidence Survey

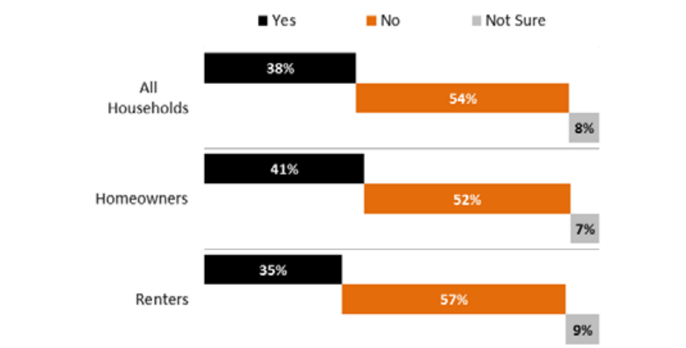
- In July, nearly seven in ten (68 percent) of all **Latino households** said that owning a home is necessary to live The Good Life and The American Dream, up from 61 percent who said so in January 2014.



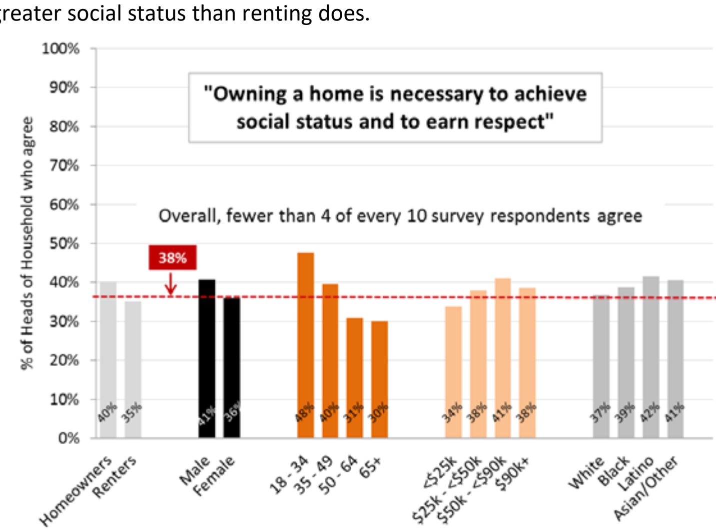
- Almost three-quarters (74 percent) of all **Latino households** in July said that owning a home provides a person more freedom than renting a home, up from 68 percent who said so in January 2014.
- In July, almost six in ten (59 percent) of **Black renters** said that owning a home someday is a specific goal they are determined to reach, up from 54 percent two years ago; seven in ten of them (70 percent) said that they expect to buy a home within the next five years, up from 65 percent two years ago.

The following series of charts illustrate how homeownership aspirations vary by tenure type and selected demographic characteristics.

"Is owning a home necessary to be a respected member of society?"



The chart below shows that households headed by millennials, and ethnic minority households, are more inclined to believe homeownership delivers greater social status than renting does.

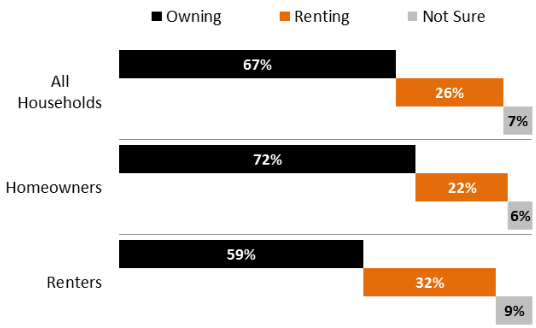


Source: Pulsenomics, July 2016 U.S. Housing Confidence Survey of 10,000 households (6,238 homeowners and 3,762 renters).
Margin of error: +/-1.2% (All Households), +/-1.5% (Homeowners), +/-2.0% (Renters), and larger for smaller population subgroups.

Social Status, Freedom, and The American Dream (cont'd)

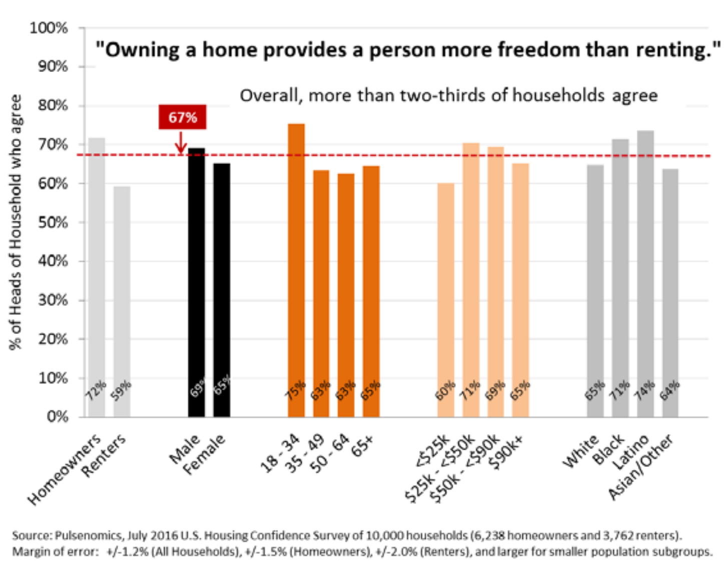
The following chart shows that a greater than two-thirds majority (67 percent) of all 10,000 heads of household surveyed in July said that homeownership provides a person more freedom and a better quality of life than renting. More than seven in ten (72 percent) of **homeowners** believe this, while fewer than six in ten (59 percent) of **renters** do.

"What provides a person more freedom: owning, or renting a home?"



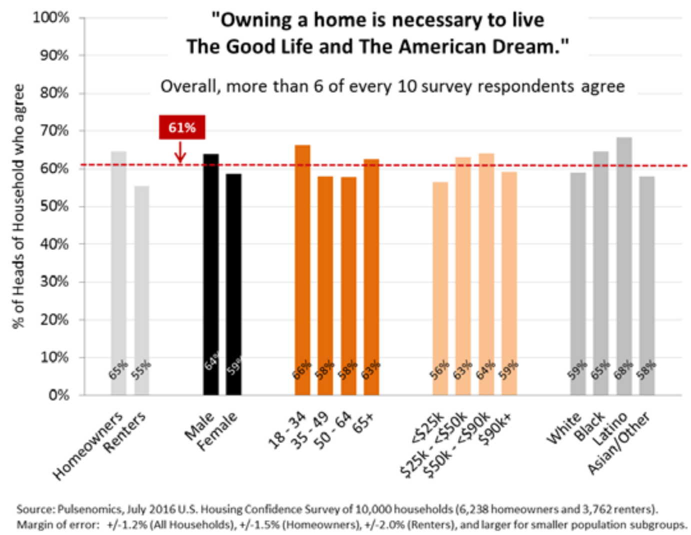
Figures may not sum to 100% due to rounding.

Along with Latino households, **millennials** believe more strongly than other population cohorts that homeownership is more liberating than renting. In July, exactly three-quarters (75 percent) of millennial-aged heads of household said that owning a home provides a person more freedom than renting one.



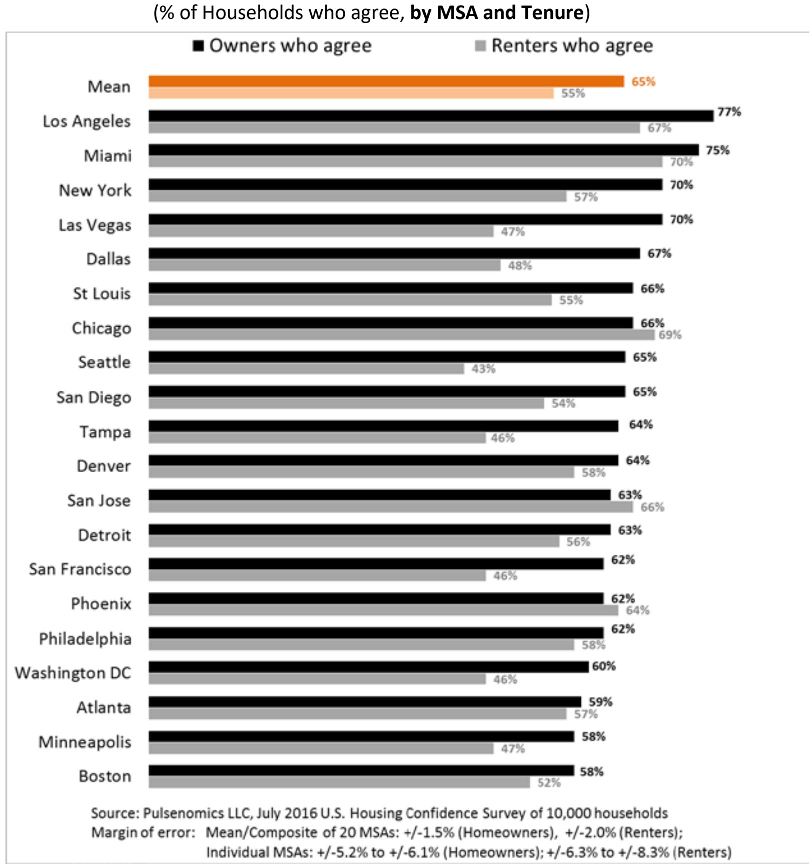
Despite the steady declines in the U.S. homeownership rate in recent years, more than six in ten (61 percent) of heads of household surveyed believe that homeownership is a necessary ingredient to living The Good Life and The American Dream.

- Once again, a demographic analysis reveals how attitudes differ by population segment: **homeowners, millennials, seniors**, and **members of ethnic minority groups** tend to associate homeownership with The American Dream more often than other population segments.



- More detailed analysis of survey responses shows the degree to which viewpoints about homeownership as "The American Dream" vary according to geography and household tenure.

"Some say that owning a home is necessary to live The Good Life and The American Dream. Do you agree? Or disagree?"
(% of Households who agree, **by MSA and Tenure**)



- In all 20 metro areas surveyed, the majority of homeowners see homeownership as a prerequisite for living The American Dream.
- In seven of the cities, one-half or fewer renter households believe that homeownership is necessary to live the American Dream.

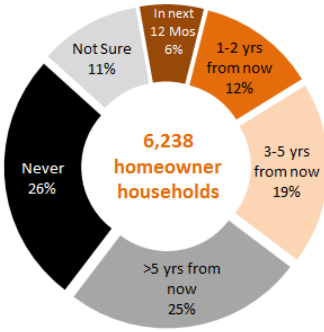
Home Buying Aspirations: Timing Matters

Another useful measure of the relative strength of homeownership aspirations is the expected timing of future home purchase activity.

Homeowners:

"When do you expect to buy a different home?"

- 37 percent of all homeowners interviewed in July said that they expect to buy a different home within the next five years. This is up slightly year-over-year (from 36 percent in July 2015).

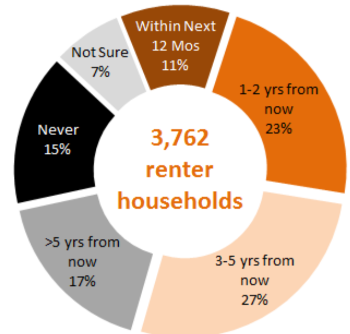


home values remain well below their peak levels (by more than 11 percent) and, at 14 percent, negative equity rates for those homeowners with a mortgage are above the U.S. average.[9]

Renters:

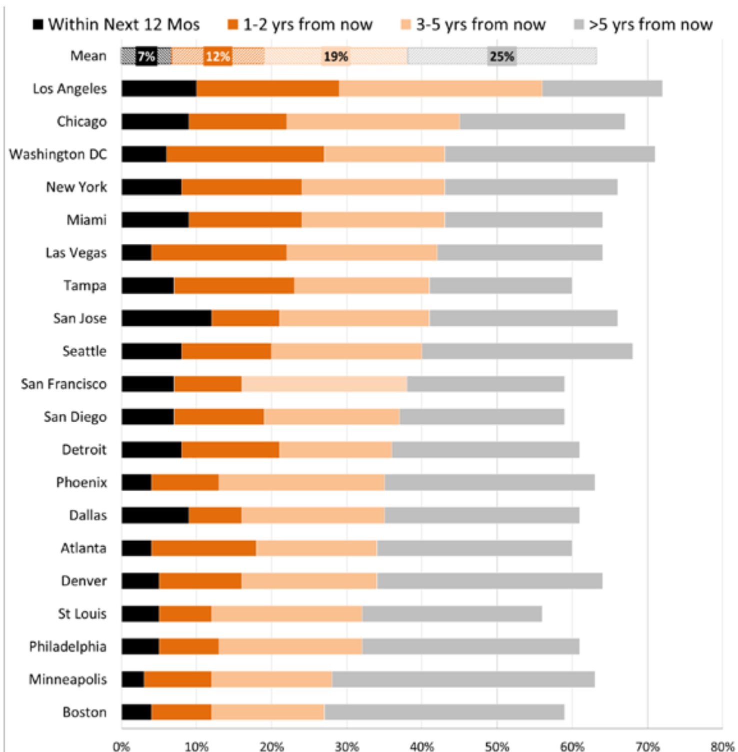
"When do you expect to buy a home?"

- In July, more than six in ten renters (61 percent) surveyed said that they expect to own a home within the next five years, and more than one-third (34 percent) of them said they expect to buy a home within the next two years.



Homeowner Responses by Metro Area

(Sorted by percent of Households Expecting to Buy within the Next 5 Years)

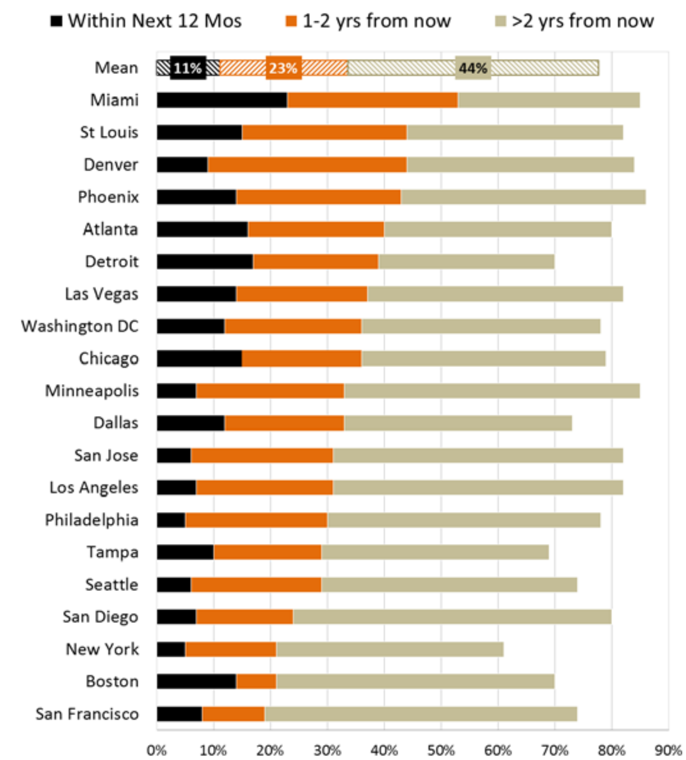


Bars do not sum to 100% because this chart excludes those homeowners who said (a) they expect to never buy again or (b) they are unsure when they might buy again.

Source: Pulsenomics July 2016 U.S. Housing Confidence Survey of 10,000 households (6,238 homeowner households)
Margin of error: Mean/Composite of 20 MSAs: +/-1.5% Individual MSAs: +/-5.2% to +/-6.1%

Renter Responses by Metro Area

(Sorted by percent of Households Expecting to Buy within the Next 2 Years)



Bars do not sum to 100% horizontally because this chart excludes those renters who said that they (a) expect never to buy or (b) are unsure when they might buy.

Source: Pulsenomics, July 2016 U.S. Housing Confidence Survey of 10,000 households, including 3,768 renters
Margin of error: Mean/Composite of 20 MSAs: +/-2.0% Individual MSAs: +/-6.3% to +/-8.3%

- **Los Angeles** is the only metro area where more than one-half (56 percent) of homeowners expect to buy a different home within the next five years. Two years ago, 39 percent of L.A. homeowners expected to buy again within five years.
- In 16 of the 20 metro areas surveyed, at least one-third of homeowners expect to buy a different home within the next five years.
- More than one-third (35 percent) of existing homeowners in **St. Louis** now say that they will never buy another home. In this metro area,

- If extrapolated to the national level, the figures in the preceding bullet point translate into an average of about seven million first-time buyers in each of the coming two years. Even if recent improvements in employment, wage growth, and negative equity rates accelerate in the near-term, it's clear that the majority of these aspirational renters will travel a longer path to homeownership than they currently expect.[10]

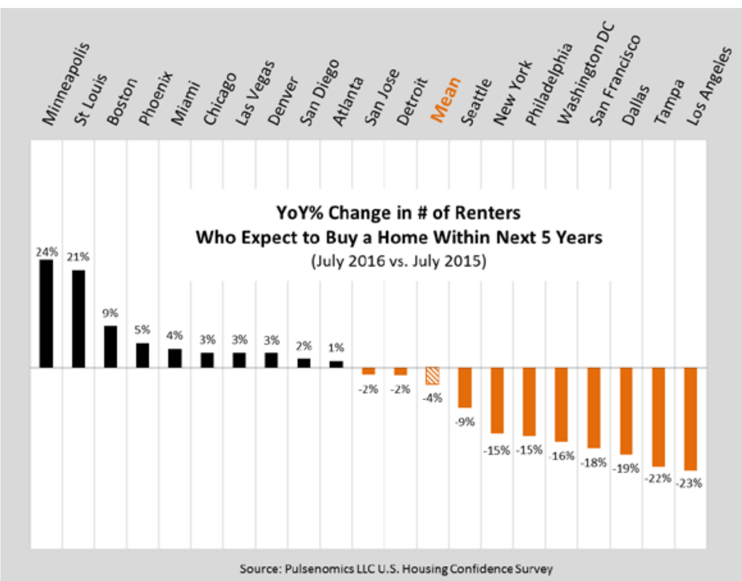
[9] Q2 2016 Zillow Negative Equity Report.
[10] We acknowledge that some (unknown) minority of renter households has owned a home in the past. There are approximately 41mm renter-occupied homes in the U.S. (34% = 13.9mm). According to NAR,

Home Buying Aspirations: Timing Matters (cont'd)

- The number of renters who expect they'll *never* buy a home is now 15 percent, unchanged from one year ago, but down from 17 percent two years ago.
- One-fifth or more of the **renters in Boston, Dallas, New York**, and **Tampa** said in July that they expect to never buy a home. In contrast, just seven percent of **Atlanta renters** said they expect to never buy, the lowest percentage of the metro areas that comprise HCS.

Over the past year, there have been several notable developments in renter expectations re: their plans to take the homeownership plunge, e.g.:

- Some renter households appear to have been discouraged by recent home inventory shortages and price increases, as the number of them who said that they expect to buy a home in the next five years has fallen four percent across the 20 large metro areas surveyed.
- Renters in one-half (ten) of the metro areas surveyed have become more optimistic that they will join the ranks of homeowners within a 5-year timeframe.
- The number of **Minneapolis renters** who said that they expect to buy a home within the next five years has increased 24 percent (from 59 percent in July 2015 to 73 percent in July 2016), while the number in **Los Angeles** has sunk by 23 percent (from 66 percent to 51 percent).



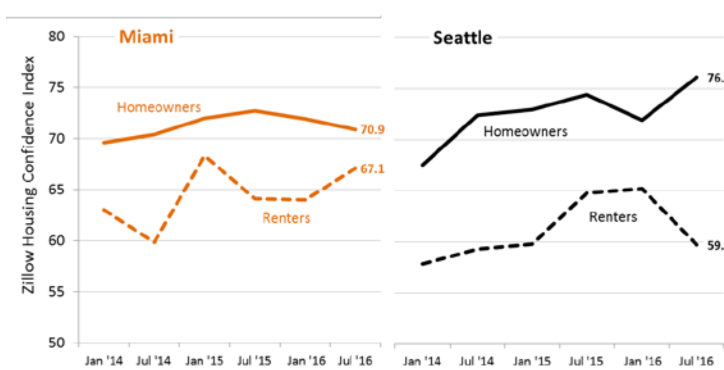
Housing Confidence by Tenure Category

While the composite measures of housing confidence for both owners and renters were up in July compared to two years ago, renter confidence has weakened during the past year (see table below).

Headline ZHCI By Tenure Category

July 2016	Homeowner Confidence Index			Renter Confidence Index		
	Level	1 yr Chg	2 yr Chg	Level	1 yr Chg	2 yr Chg
US Composite	71.3	▲ 1.7	▲ 3.6	61.2	▼ -0.6	▲ 2.4
Atlanta	70.6	▲ 2.7	▲ 4.8	63.6	▼ -1.4	▼ -0.4
Boston	71.9	▲ 1.3	▲ 2.3	60.9	▲ 1.9	▲ 2.0
Chicago	67.2	▼ -2.0	▲ 4.5	63.3	▲ 6.0	▲ 8.5
Dallas	74.0	▲ 2.5	▲ 6.8	59.0	▼ -2.5	▼ -0.2
Denver	72.0	▼ -0.2	▲ 2.9	67.0	0.0	▲ 3.6
Detroit	69.3	▲ 3.1	▲ 2.1	62.1	▲ 4.5	▲ 5.7
Las Vegas	73.0	▲ 0.6	▲ 5.6	60.0	▼ -2.7	▲ 1.8
Los Angeles	75.9	▲ 3.6	▲ 2.5	63.6	▼ -0.8	▲ 4.1
Miami	70.9	▼ -1.8	▲ 0.5	67.1	▲ 3.0	▲ 7.3
Minneapolis	69.1	▲ 0.4	▲ 2.6	64.3	▲ 5.2	▲ 2.7
New York	70.6	▲ 3.9	▲ 3.7	57.3	▼ -3.4	▼ -0.8
Philadelphia	67.3	▲ 3.2	▲ 5.0	61.1	▲ 2.8	▲ 7.1
Phoenix	73.5	▲ 0.2	▲ 6.9	65.9	▲ 3.3	▲ 6.3
St. Louis	66.4	▲ 4.1	▲ 3.8	56.6	▼ -2.5	▲ 0.3
San Diego	73.6	▲ 1.5	▲ 2.3	61.7	▲ 0.8	▲ 3.8
San Francisco	72.9	▼ -0.1	▼ -0.7	60.1	▼ -3.3	▼ -1.7
San Jose	71.5	▼ -3.4	▼ -1.1	61.0	▼ -7.0	▲ 0.8
Seattle	76.1	▲ 1.7	▲ 3.7	59.7	▼ -5.0	▲ 0.4
Tampa	72.0	▲ 4.6	▲ 6.2	57.9	▼ -5.9	▼ -0.2
Washington DC	73.0	▲ 1.1	▲ 2.9	62.6	▼ -1.4	▲ 1.5

- Year-over-year, the overall level of housing confidence for renters (HCI: 61.2,↓0.6) diminished while homeowner confidence moved higher (HCI: 71.3,↑1.7), widening the gap in sentiment between household tenure categories.
- **Homeowner confidence** continues to exceed **renter confidence** in every metro area studied; the gap between the two is greatest in **Seattle**, and smallest in **Miami** (with **Chicago** close behind), where all three HCI sub-indices–which separately quantify assessments of housing market conditions, expectations, and homeownership aspirations–have rebounded during the past year for renter households, but have fallen for homeowners.



about 40% of all home sales involve a first-time buyer in a "normal" year. If one assumes 5.5mm total average annual home sales, first-time buyers would absorb 2.2mm units in each "normal" year.

U.S. Housing Confidence™ Report

September 2016

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- Although still in positive territory (i.e., above the 50.0 index level), renter confidence in **St. Louis** is still the lowest of the 20 metro areas–despite its 4.7 point increase since the start of the year.
- **Western and Southwestern cities** continue to dominate the top housing confidence rankings for homeowners, but sentiment among renters in several of these pricey metro areas is showing signs of weakness. For example, renter confidence in both **Seattle** and **San Jose** has plunged more than 5 points since the start of the year to levels that are below the mean of the 20 metros studied.
- Although still in positive territory (i.e., index levels > 50), sentiment remains relatively weak among households in **Eastern and Midwestern metro areas**.

Rankings of Selected ZHCIs and Housing Confidence Indicators

Housing Confidence Index Rankings (Headline Levels, by Tenure)

	July 2016 Rank	Homeowner Confidence: Metro Area	Homeowner Confidence: Index Level	Renter Confidence: Metro Area	Renter Confidence: Index Level
Top Five	1	Seattle	76.1	Miami	67.1
	2	Los Angeles	75.9	Denver	67.0
	3	Dallas	74.0	Phoenix	65.9
	4	San Diego	73.6	Minneapolis	64.3
	5	Phoenix	73.5	Los Angeles	63.6
		US Composite	71.3	US Composite	61.2
Bottom Five	16	Detroit	69.3	Seattle	59.7
	17	Minneapolis	69.1	Dallas	59.0
	18	Philadelphia	67.3	Tampa	57.9
	19	Chicago	67.2	New York	57.3
	20	St. Louis	66.4	St. Louis	56.6

Home Value Expectations Rankings: Next 12 months Appreciation

All Respondents: Rank	Metro	Mean (%)	Home Owners: Rank	Metro	Mean (%)	Renters: Rank	Metro	Mean (%)
1	Seattle	5.04	1	Seattle	5.18	1	Denver	5.59
2	San Francisco	4.81	2	San Jose	4.52	2	San Francisco	5.01
3	Denver	4.44	3	San Francisco	4.48	3	Seattle	4.90
4	San Jose	4.34	4	Denver	4.15	4	San Jose	4.05
5	Phoenix	3.90	5	Dallas	3.92	5	Phoenix	3.85
6	Dallas	3.67	6	Phoenix	3.70	6	Dallas	3.79
7	San Diego	3.54	7	San Diego	3.61	7	Minneapolis	3.68
8	Tampa	3.39	8	Miami	3.55	8	San Diego	3.46
9	Las Vegas	3.25	9	Tampa	3.37	9	Los Angeles	3.38
10	Atlanta	3.12	10	Las Vegas	3.21	10	Atlanta	3.37
11	Miami	3.11	11	Washington DC	3.13	11	Las Vegas	3.32
12	Los Angeles	3.08	12	Los Angeles	3.04	12	Boston	3.17
13	Washington DC	3.05	13	Atlanta	3.00	13	Tampa	3.15
14	Boston	2.97	14	New York	2.94	14	Washington DC	3.04
15	New York	2.85	15	Chicago	2.93	15	New York	2.66
16	Minneapolis	2.67	16	Boston	2.88	16	Detroit	2.48
17	Detroit	2.58	17	Detroit	2.54	17	Chicago	2.26
18	Chicago	2.54	18	Minneapolis	2.29	18	Miami	2.15
19	St Louis	1.73	19	St Louis	2.17	19	Philadelphia	0.92
20	Philadelphia	1.65	20	Philadelphia	1.86	20	St Louis	0.36
20-Metro Average		**3.29**	**20-Metro Average**		**3.32**	**20-Metro Average**		**3.23**

Source: July 2016 U.S. Housing Confidence Survey

Home Value Expectations Rankings: Next 10 Years Appreciation

(Expected Average Annual Rate)

All Respondents: Rank	Metro	Mean (%)	Home Owners: Rank	Metro	Mean (%)	Renters: Rank	Metro	Mean (%)
1	San Diego	4.95	1	San Jose	5.46	1	Philadelphia	5.38
2	San Francisco	4.95	2	Seattle	5.34	2	San Diego	5.35
3	San Jose	4.84	3	San Francisco	4.99	3	San Francisco	4.46
4	Seattle	4.69	4	Phoenix	4.76	4	Boston	4.24
5	Boston	4.43	5	New York	4.76	5	Los Angeles	4.13
6	Los Angeles	4.43	6	Los Angeles	4.75	6	Minneapolis	3.96
7	Tampa	4.28	7	Washington DC	4.70	7	Atlanta	3.93
8	New York	4.27	8	San Diego	4.60	8	Denver	3.81
9	Phoenix	4.22	9	Tampa	4.52	9	San Jose	3.53
10	Miami	4.06	10	Boston	4.41	10	Tampa	3.52
11	Atlanta	4.00	11	Dallas	4.28	11	New York	3.39
12	Philadelphia	3.92	12	Miami	4.27	12	Miami	3.33
13	Dallas	3.90	13	Las Vegas	4.24	13	Seattle	3.28
14	Washington DC	3.87	14	Atlanta	4.21	14	Detroit	3.15
15	Denver	3.79	15	Chicago	3.90	15	Dallas	3.00
16	Las Vegas	3.77	16	Detroit	3.73	16	Phoenix	3.00
17	Detroit	3.60	17	Denver	3.70	17	Las Vegas	2.79
18	Minneapolis	3.59	18	Minneapolis	3.40	18	Chicago	2.58
19	Chicago	3.40	19	Philadelphia	3.24	19	Washington DC	2.32
20	St Louis	2.48	20	St Louis	3.12	20	St Louis	1.03
20-Metro Average		**4.07**	**20-Metro Average**		**4.32**	**20-Metro Average**		**3.51**

- Since the inception of ZHCI in January 2014, homeownership aspirations among **Miami renters** have been consistently high; in **L.A., Detroit, and D.C.**, renter aspirations have rebounded from bottom-five rankings into the top ten.
- Renter aspirations in **Boston, New York, Seattle, and Tampa** have moved into the bottom-five, and are now flirting with deficit (i.e., sub-50) RAI levels.

Renter Homeownership Aspirations Index

Sorted by Change in HAI Rank Since January 2014

	January 2014: Renter HAI Level	January 2014: Renter HAI Rank	July 2016: Renter HAI Level	July 2016: Renter HAI Rank	Renter HAI Rank Change
Los Angeles	54.8	18	64.1	4	▲ 14
Detroit	55.8	16	63.8	6	▲ 10
Washington DC	57.0	15	62.8	7	▲ 8
Phoenix	61.1	8	68.6	2	▲ 6
San Francisco	51.1	20	56.3	15	▲ 5
Philadelphia	58.0	14	60.8	10	▲ 4
Chicago	59.0	11	62.4	8	▲ 3
Minneapolis	53.8	19	56.0	16	▲ 3
Saint Louis	59.6	10	61.4	9	▲ 1
Denver	63.0	5	64.0	5	0
Miami	67.4	1	69.1	1	0
Atlanta	63.9	2	64.1	3	▼ -1
Seattle	55.4	17	53.5	19	▼ -2
San Diego	60.4	9	58.8	14	▼ -5
Boston	58.4	12	53.7	18	▼ -6
San Jose	62.4	6	60.5	12	▼ -6
Tampa	58.2	13	52.3	20	▼ -7
Las Vegas	63.4	3	60.5	11	▼ -8
Dallas	63.0	4	59.5	13	▼ -9
New York	61.6	7	55.7	17	▼ -10
U.S. Composite	59.3	n/a	60.1	n/a	n/a

U.S. Housing Confidence™ Report

September 2016

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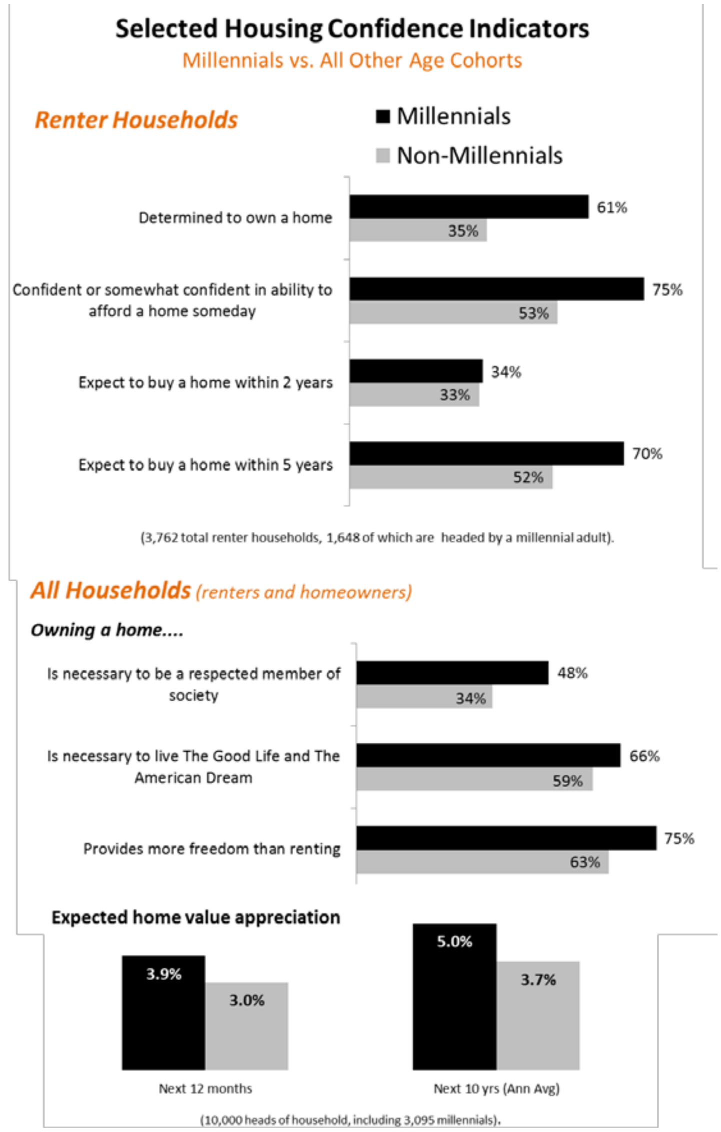
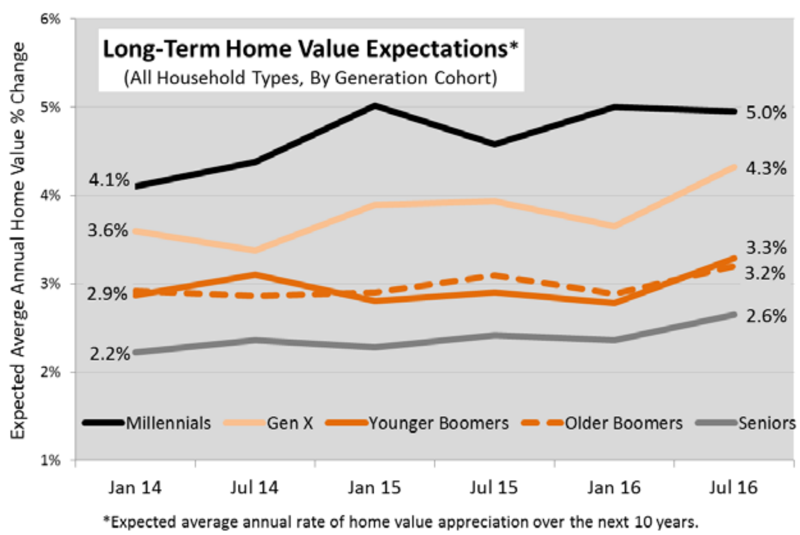
The Millennial Monitor

> *The U.S. millennial generation–the group of people 18 to 34 years of age in 2015–is projected by The Census Bureau to exceed 75 million and surpass the baby boomers to become the largest generation this year. The attitudes and actions of members of this group will influence the health and dynamics of U.S. housing markets in the coming decades more than those of any other population segment. This is why monitoring the millennial mindset concerning the housing market is–and will continue to be– important.*

Since the historic U.S. housing bust, there has been much speculation that millennials would lead a permanent shift away from homeownership. However, as preceding pages within this report indicate, the July 2016 HCS data confirm yet again what we have reported since early 2014: **millennials continue to have a hearty appetite for homeownership**–despite heavy student debt loads, slow income growth, low savings, and in some cases, painful foreclosure crisis experiences.

- Millennial-age heads of household confirmed their upbeat sentiments concerning the housing market in July, which are buoyed by **exceptionally strong homeownership aspirations and expectations for future home value growth** relative to other age cohorts.[11]
- More than six in ten (61 percent) millennial renters said they are **determined to own a home someday**. This housing confidence indicator is up from 58 percent in January, and remains substantially higher relative to all other renters.
- Notwithstanding their uncertain near-term income growth prospects, increasing student debt loads, and inevitable mortgage rate increases in the future, three-quarters (75 percent) of **millennial renters are confident, or somewhat confident, that they will be able to afford to own a home** someday.
- **Seven in ten millennial renters expect to buy a home within the next 5 years**, while just over one-half (52 percent) of all other renters expect to.
- Three-quarters (75 percent) of millennial heads of all households believe that **owning a home provides a person more freedom than renting** a home, up from the 70 percent that said so in January.
- Although millennials' long-term home value expectations dipped in July (very slightly, from 5.00% to 4.95%), and those of all other age cohorts increased, **millennials' long-run expectations for home values remain significantly higher** than those of older heads of household.





[11] Of the 10,000 respondents to the July 2016 U.S. Housing Confidence Survey, 3,095 were of the millennial generation. In aggregate, the 20 metro areas sampled by Pulsenomics for The U.S. Housing Confidence Survey represent about 35% of the total U.S. population; the views of households residing in these markets (and those of subgroups, such as the millennial generation) may differ from those of the entire U.S. population and its corresponding subgroups.

Selected Reference Material and Data

- Fact Sheet
  https://pulsenomics.com/uploads/Fact_Sheet_1.12.pdf
- An Overview
  The U.S. Housing Confidence™ Survey and
  The Zillow® Housing Confidence™ Index
  https://pulsenomics.com/uploads/HCS_HCI_Overview_v1.3.pdf
- Complete ZHCI Data Set
  https://pulsenomics.com/Housing_Confidence_Index.html or
  http://www.zillow.com/research/
- Gauging Confidence in the U.S. Housing Market
  Office of Policy Development and Research (PD&R) of the
  U.S. Department of Housing and Urban Development
  Cityscape Journal
  http://www.huduser.org/portal/periodicals/cityscpe/vol17num2/article13.html
- The U.S. Housing Confidence™ Survey Instrument
  https://pulsenomics.com/uploads/HCS_Instrument_v1.12.pdf
- The U.S. Housing Confidence™ Index Methodology
  https://pulsenomics.com/uploads/HCI_Methodology_v1.12.pdf

HCS Statement of Methodology

The research for The U.S. Housing Confidence™ Survey is conducted using blended sample, mixed mode technology. This approach supplements a landline sample frame using the Random Digit Dialing (RDD) method with an internet-user sample frame that ensures that the views of respondents without a home telephone (i.e., cell phone users) also are reflected in the research data. Respondents reachable on a landline (home) telephone are interviewed on their home telephone in the recorded voice of a professional announcer, with re-attempts made to busy signals, no-answers and answering machines. Landline households are selected at random. Listed and unlisted landline phones have an equal chance of being included. Respondents not reachable on a landline phone (i.e., adults who use their cell phone instead of a landline phone for all or most of their voice communications) are shown a questionnaire via the internet on their smartphone, tablet, or other electronic device. The survey instrument is administered to adults age 18 or older who make, or share in making, most of a household's financial decisions. For each metropolitan area, the respondent universe from the landline and internet samples are combined and weighted using the most recent US Census estimate for age, gender, ethnic origin, and household tenure to align the sample to the population. The presentation of research results contains the dates on which interviews were conducted and the geography that was surveyed. The exact wording of the questions, as experienced by the respondent, is shown. All questions are reported. No questions are suppressed. Interviews were conducted in English.

Assigned to each question within the instrument is a theoretical margin of sampling error. Note that such error is useful only in theory. (Though commonly cited in the presentation of research results, *sampling error is only one of many types of error that may influence the outcome of an opinion research study*. More practical concerns include the way in which questions are worded and ordered, the inability to contact some members of the population, the refusal of others to be interviewed, and the difficulty of translating each questionnaire into all possible languages and dialects. Non-sampling errors cannot be quantified). In theory, one can say with 95 percent certainty that the results of the landline sample would not vary by more than the stated margin of sampling error, in one direction or the other, had the entire universe of landline respondents been interviewed with complete accuracy. Fieldwork for this survey was completed by SurveyUSA of Clifton, NJ.

This statement conforms to the principles of disclosure as recommended by the National Council on Public Polls (NCPP).

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Fact Sheet

The U.S. Housing Confidence™ Survey
The Zillow® Housing Confidence™ Index

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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, there has been no scientific approach or concerted effort to measure this important economic driver–until now.

The U.S. Housing Confidence™ Survey (HCS) is a unique, unprecedented 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 Zillow® Housing Confidence™ Index*** (ZHCI), a forward-looking gauge of housing market health with low data latency. ZHCI is positioned to be a leading indicator of future home value changes and macroeconomic activity.[12]

Unlike legacy measures of the housing market and surveys of consumer economic sentiment, HCS:

- Focuses exclusively on the scientific measurement of confidence in the particular real estate market where each interviewed respondent resides
- Gauges attitudes among homeowners and renters concerning homeownership and prevailing market conditions at the individual metropolitan area level
- Measures expectations concerning future affordability and home values (for both short-term and long-term horizons) among both homeowners and renters
- Via ZHCI, enables consistent and concise reporting of survey results for easy public consumption and comprehension

Zillow, Inc. is the sponsor of this project. Pulsenomics LLC is the author of HCS, and the author of and calculation agent for ZHCI. This extensive research effort was inspired, in part, by the encouragement, input, and lifetime work of Karl Case and Robert Shiller, with whom Pulsenomics founder Terry Loebs has collaborated with over the past two decades.

The U.S. Housing Confidence™ Survey

Every edition entails:

- Completion of 10,000 interviews with household heads residing in major metropolitan real estate markets across the country
- Compilation of more than 350,000 individual responses generated by the HCS survey questionnaire
- Computation and publication of a wide variety of housing confidence indexes (ZHCI), 252 in all
  - ✓ U.S. Composite
  - ✓ Individual Metro Areas
  - ✓ By Tenure (Homeowners, Renters)
  - ✓ Headline Housing Confidence Index
  - ✓ Housing Market Conditions Index
  - ✓ Housing Expectations Index
  - ✓ Homeownership Aspirations Index

The U.S. Housing Confidence Survey is sponsored by Zillow®

"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. This housing confidence data is a critical input 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 an authoritative measure of U.S. housing confidence is 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 the ZHCI, 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 ZHCI 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.

[12] Zillow® is a registered trademark of Zillow, Inc. Pulsenomics®, Housing Confidence™ Survey, and Housing Confidence™ Index are trademarks of Pulsenomics LLC. Presently, ZHCI values are published bi-annually and are freely available online via Pulsenomics and Zillow Research.

Index Structure

Similar to the basic approach used to construct some of the most popular U.S. confidence indices and economic indicators, The ZHCI is calculated using a weighted diffusion index methodology.[13] The ZHCI is set on a scale of 0 to 100: index values greater than 50 indicate a surplus of confidence, values equal to 50 indicate a neutral degree of confidence, and values less than 50 indicate a confidence deficit. Each "headline" ZHCI is a weighted composite measure of three underlying indicator indices that quantify a unique dimension of confidence in the housing market.

HEADLINE INDEX

Housing Confidence Index (HCI)

INDICATOR INDICES

INDICATOR CONTRIBUTORS (collected from the U.S. Housing Confidence Survey)

Housing Market Conditions Index (HMCI) — 25% Weight

- Local home values relative to inflation (past 12 mos)
- Current direction of local housing market
- Local market buying conditions
- Local market selling conditions

Housing Expectations Index (HEI) — 50% Weight

- Near-term: Expected direction and pace of local home value change over the coming 12-month period, relative to expected inflation
- Long-term: Expected direction and pace of local home value change over the coming 10-year period, relative to expected inflation
- Confidence re: future affordability of current home (homeowners)
- Confidence re: future affordability of homeownership (renters)
- Financial value of homeownership vs. renting
- Investment value of homeownership vs. other investment options

Homeownership Aspirations Index (HAI) — 25% Weight

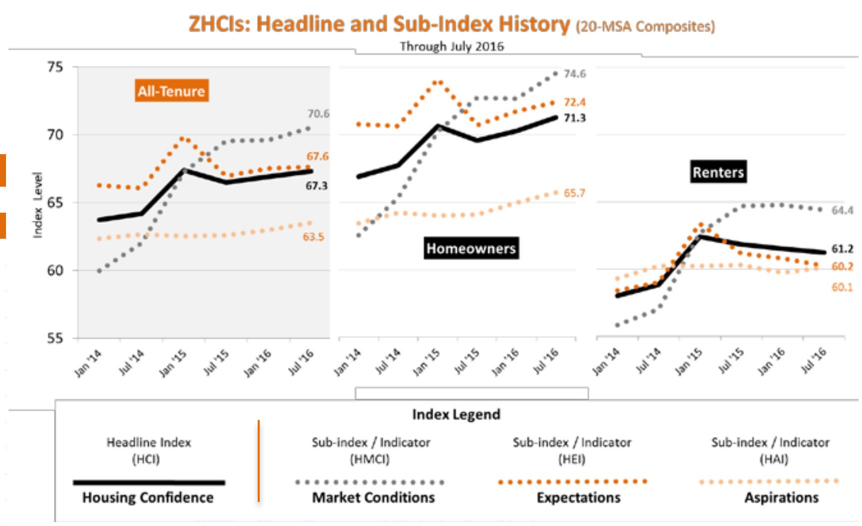
Assessment of whether owning a home:

- Provides more (or less) freedom than renting
- Is necessary to live The Good Life and The American Dream
- Is necessary to achieve social status and earn respect
- If and when existing homeowners plan to buy again in the future
- Renters planning to buy a home within coming 5 years
- Homeownership mind share among renters

Metro-specific and Tenure-Specific Coverage

- Pulsenomics calculates and maintains a total of 252 U.S. housing confidence index series: headline and indicator indices for each of 20 individual metropolitan areas, as well as composite measures that gauge housing confidence across the country.

July 2016	Homeowner Confidence Index			Renter Confidence Index		
	Level	1 yr Chg	2 yr Chg	Level	1 yr Chg	2 yr Chg
US Composite	**71.3**	1.7	3.6	**61.2**	-0.6	2.4
Atlanta	70.6	2.7	4.8	63.6	-1.4	-0.4
Boston	71.9	1.3	2.3	60.9	1.9	2.0
Chicago	67.2	-2.0	4.5	63.3	6.0	8.5
Dallas	74.0	2.5	6.8	59.0	-2.5	-0.2
Denver	72.0	-0.2	2.9	67.0	0.0	3.6
Detroit	69.3	3.1	2.1	62.1	4.5	5.7
Las Vegas	73.0	0.6	5.6	60.0	-2.7	1.8
Los Angeles	75.9	3.6	2.5	63.6	-0.8	4.1
Miami	70.9	-1.8	0.5	67.1	3.0	7.3
Minneapolis	69.1	0.4	2.6	64.3	5.2	2.7
New York	70.6	3.9	3.7	57.3	-3.4	-0.8
Philadelphia	67.3	3.2	5.0	61.1	2.8	7.1
Phoenix	73.5	0.2	6.9	65.9	3.3	6.3
St. Louis	66.4	4.1	3.8	56.6	-2.5	0.3
San Diego	73.6	1.5	2.3	61.7	0.8	3.8
San Francisco	72.9	-0.1	-0.7	60.1	-3.3	-1.7
San Jose	71.5	-3.4	-1.1	61.0	-7.0	0.8
Seattle	76.1	1.7	3.7	59.7	-5.0	0.4
Tampa	72.0	4.6	6.2	57.9	-5.9	-0.2
Washington DC	73.0	1.1	2.9	62.6	-1.4	1.5



- In addition to the four all-tenure ZHCIs produced for each metro market, Pulsenomics calculates tenure-specific sub-indices, i.e., headline and indicator ZHCIs for (a) the subset of HCS respondents who are homeowners and (b) the subset of respondents who are renters.

More information concerning HCS and ZHCI, including the HCS questionnaire and HCI methodology, can be found online at pulsenomics.com and zillow.com/research/

[13] The NAHB Homebuilder Confidence Index, The Institute of Supply Management Purchasing Managers' Index, The Conference Board's Consumer Confidence Index, and Thomson Reuters/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. For complete details of the methodology employed by Pulsenomics to calculate ZHCI, see https://pulsenomics.com/Housing_Confidence_Index.html