

# HOME PRICE EXPECTATIONS SURVEY

## Top-10 Rankings for 2021

1-Year Horizon (Dec 2021 / Dec 2020)

Benchmark: US ZHVI **19.58%**

2021 Expectations

Rank	Panelist	Title	Affiliation	Panelist Expectations, By Survey Edition:			
				Q1 2021	Q2 2021	Q3 2021	Q4 2021
1	Steven Katz	Chief Investment Officer and EVP, Residential Financing	Arbor Realty Trust	7.25%	18.00%	20.00%	20.00%
2	Stan Humphries / Svenja Gudell	Chief Economist / Senior Economist	Zillow	10.80%	13.90%	20.30%	19.50%
3	Alex Villacorta	ResiShares, LLC	Co-Founder & Chief Data Officer	8.00%	14.00%	17.50%	19.50%
4	Gregory Daco / Kathy Bostjancic	Chief U.S. Economist / Head of U.S. Macro Investors Service	Oxford Economics	9.60%	12.40%	15.80%	20.70%
5	Edward Pinto	Resident Fellow	American Enterprise Institute	9.50%	14.50%	15.10%	17.00%
6	Michael Moran	Chief Economist	Daiwa Capital Markets	8.50%	11.50%	16.00%	19.25%
7	Chris Stroud	Co-founder, Chief of Research	HouseCanary	9.10%	12.90%	13.90%	18.80%
8	Brian Wesbury / Robert Stein	Chief Economist / Senior Economist	First Trust Advisors	7.80%	11.20%	15.90%	19.40%
9	Paul Carrillo	Professor of Economics	George Washington University	9.00%	11.00%	15.00%	20.00%
10	James Smith	Chief Economist	Parsec Financial Management	7.80%	10.20%	17.80%	17.80%

2-Year Horizon (Dec 2021 / Dec 2019)

Benchmark: US ZHVI **29.52%**

2020 Expectations

Rank	Panelist	Title	Affiliation	Panelist Expectations, By Survey Edition:			
				Q1 2020	Q2 2020	Q3 2020	Q4 2020
1	Jim Kleckley	Director, Bureau of Business Research	East Carolina University	9.88%	9.36%	9.25%	14.81%
2	Raymond Hodgdon	CEO	Enlightened Economics	17.18%	5.37%	10.88%	9.20%
3	Michael Englund	Chief Economist	Action Economics LLC	10.04%	8.37%	8.89%	12.78%
4	John Silvia	CEO and Founder	Dynamic Economic Strategy	11.30%	11.82%	9.93%	6.60%
5	Amy Crews Cutts	Chief Economist	Equifax	8.00%	8.37%	9.31%	13.96%
6	James Smith	Chief Economist	Parsec Financial Management	8.26%	6.60%	6.60%	18.15%
7	Maria Fiorini Ramirez	Chief Executive Officer	MFR, Inc.	7.12%	5.58%	14.48%	11.09%
8	Stacy Sirmans	Director	FSU Center for Real Estate Education & Research	11.30%	7.12%	10.25%	9.20%
9	James Gaines	Chief Economist	Texas A&M University Real Estate Center	8.16%	4.55%	10.25%	14.48%
10	Barry Habib	CEO	MBS Highway	8.98%	3.37%	12.15%	12.78%

Benchmark: US ZHVI **29.52%**

2019 Expectations

Rank	Panelist	Title	Affiliation	Panelist Expectations, By Survey Edition:			
				Q1 2019	Q2 2019	Q3 2019	Q4 2019
1	Raymond Hodgdon	CEO	Enlightened Economics	14.28%	14.49%	15.99%	15.13%
2	Marsha Courchane	Director, Financial Economics	CRA International	12.15%	12.56%	11.30%	14.17%
3	Jim Kleckley	Director, Bureau of Business Research	East Carolina University	12.88%	12.60%	11.57%	10.35%
4	Stacy Sirmans	Director	FSU Center for Real Estate Education & Research	11.83%	11.30%	11.30%	12.36%
5	Edward Pinto	Resident Fellow	American Enterprise Institute	11.40%	11.19%	11.19%	10.88%
6	Grant Thrall	President	American Real Estate Society	12.89%	12.89%	12.99%	5.88%
7	Mark Fleming	Senior Vice President, Chief Economist	First American Financial Corporation	9.20%	11.30%	12.63%	10.25%
8	Don Rissmiller	Chief Investment Strategist	Strategas Research Partners LLC	8.16%	9.20%	11.30%	12.36%
9	Carlos Garriga	Senior Economist	Federal Reserve Bank of St. Louis	10.56%	14.17%	5.58%	10.25%
10	Michael Englund	Chief Economist	Action Economics LLC	9.52%	9.73%	9.73%	10.04%

Benchmark: US ZHVI **29.52%**

2018 Expectations

Rank	Panelist	Title	Affiliation	Panelist Expectations, By Survey Edition:			
				Q1 2018	Q2 2018	Q3 2018	Q4 2018
1	Jim Kleckley	Director, Bureau of Business Research	East Carolina University	12.98%	14.62%	12.86%	12.88%
2	Grant Thrall	President	American Real Estate Society	9.10%	19.90%	15.29%	8.89%
3	Edward Pinto	Resident Fellow	American Enterprise Institute	11.30%	13.95%	11.83%	11.40%
4	Raymond Hodgdon	CEO	Enlightened Economics	11.41%	15.03%	7.23%	13.96%
5	Mark Fleming	Senior Vice President, Chief Economist	First American Financial Corporation	13.96%	9.73%	13.42%	9.73%
6	Douglas Holtz-Eakin	President	American Action Forum	9.73%	11.30%	12.35%	10.78%
7	Matthew Fienup	Economist, Economic Forecasting and Research Center	California Lutheran Univ. Ctr for Economic Forecasting & Research	8.99%	10.57%	11.72%	11.09%
8	Stacy Sirmans	Director	FSU Center for Real Estate Education & Research	10.78%	9.20%	11.30%	10.78%
9	Michael Englund	Chief Economist	Action Economics LLC	10.04%	10.99%	10.99%	9.41%
10	Nathaniel Karp	Chief U.S. Economist	BBVA Research	7.22%	11.09%	14.17%	7.02%

Benchmark: US ZHVI **29.52%**

2017 Expectations

Rank	Panelist	Title	Affiliation	Panelist Expectations, By Survey Edition:			
				Q1 2017	Q2 2017	Q3 2017	Q4 2017
1	Raymond Hodgdon	CEO	Enlightened Economics	12.89%	11.72%	11.83%	11.30%
2	Stacy Sirmans	Director	FSU Center for Real Estate Education & Research	13.42%	10.25%	10.25%	10.25%
3	Jim Kleckley	Director, Bureau of Business Research	East Carolina University	10.23%	9.85%	11.09%	11.56%
4	Barry Habib	CEO	MBS Highway	11.62%	12.35%	9.47%	9.19%
5	Matthew Fienup	Economist, Economic Forecasting and Research Center	California Lutheran Univ. Ctr for Economic Forecasting & Research	10.57%	10.57%	10.67%	8.26%
6	Mark Fleming	Senior Vice President, Chief Economist	First American Financial Corporation	7.64%	11.30%	11.30%	9.10%
7	Ingo Winzer	President	Local Market Monitor	10.88%	10.25%	9.41%	8.16%
8	Rajeev Dhawan	Director, Economic Forecasting Center	Georgia State University	8.88%	10.46%	10.88%	8.16%
9	Michael Englund	Chief Economist	Action Economics LLC	9.41%	9.41%	9.62%	9.62%
10	KC Sanjay	Founder	KC Economics and Real Estate Advisors	10.14%	9.41%	7.64%	7.22%

# HOME PRICE EXPECTATIONS SURVEY

## Top-10 Rankings for 2021

3-Year Horizon (Dec 2021 / Dec 2018)

2019 Expectations

Rank	Panelist	Title	Affiliation
1	Raymond Hodgdon	CEO	Enlightened Economics
2	Marsha Courchane	Director, Financial Economics	CRA International
3	Stacy Sirmans	Director	FSU Center for Real Estate Education & Research
4	Jim Kleckley	Director, Bureau of Business Research	East Carolina University
5	Edward Pinto	Resident Fellow	American Enterprise Institute
6	Grant Thrall	President	American Real Estate Society
7	Mark Fleming	Senior Vice President, Chief Economist	First American Financial Corporation
8	Carlos Garriga	Senior Economist	Federal Reserve Bank of St. Louis
9	Michael Englund	Chief Economist	Action Economics LLC
10	Don Rissmiller	Chief Investment Strategist	Strategas Research Partners LLC

Benchmark: US ZHVI <b>34.25%</b>				
Panelist Expectations, By Survey Edition:				
Q1 2019	Q2 2019	Q3 2019	Q4 2019	
22.73%	22.85%	25.27%	23.42%	
19.33%	21.56%	19.54%	22.73%	
19.10%	17.98%	17.98%	20.23%	
20.89%	19.92%	18.26%	15.32%	
19.20%	18.42%	18.42%	17.64%	
21.81%	21.81%	21.13%	8.64%	
14.66%	16.87%	18.82%	15.76%	
17.47%	22.73%	7.69%	17.41%	
15.21%	16.31%	16.31%	16.64%	
13.57%	14.66%	17.98%	15.73%	

2018 Expectations

Rank	Panelist	Title	Affiliation
1	Grant Thrall	President	American Real Estate Society
2	Jim Kleckley	Director, Bureau of Business Research	East Carolina University
3	Edward Pinto	Resident Fellow	American Enterprise Institute
4	Mark Fleming	Senior Vice President, Chief Economist	First American Financial Corporation
5	Raymond Hodgdon	CEO	Enlightened Economics
6	Douglas Holtz-Eakin	President	American Action Forum
7	Stacy Sirmans	Director	FSU Center for Real Estate Education & Research
8	Matthew Fienup	Economist, Economic Forecasting and Research Center	California Lutheran Univ. Ctr for Economic Forecasting & Research
9	Michael Englund	Chief Economist	Action Economics LLC
10	Nathaniel Karp	Chief U.S. Economist	BBVA Research

Benchmark: US ZHVI <b>34.25%</b>				
Panelist Expectations, By Survey Edition:				
Q1 2018	Q2 2018	Q3 2018	Q4 2018	
13.84%	33.09%	24.52%	15.42%	
20.18%	23.01%	20.75%	20.89%	
18.53%	23.07%	19.88%	19.20%	
22.50%	15.76%	21.36%	15.76%	
17.76%	24.00%	11.51%	21.93%	
15.76%	18.53%	21.90%	17.42%	
17.42%	15.21%	17.98%	17.42%	
14.77%	17.09%	18.32%	17.31%	
15.98%	17.65%	17.65%	14.88%	
11.94%	18.09%	22.73%	12.69%	

2017 Expectations

Rank	Panelist	Title	Affiliation
1	Raymond Hodgdon	CEO	Enlightened Economics
2	Stacy Sirmans	Director	FSU Center for Real Estate Education & Research
3	Jim Kleckley	Director, Bureau of Business Research	East Carolina University
4	Matthew Fienup	Economist, Economic Forecasting and Research Center	California Lutheran Univ. Ctr for Economic Forecasting & Research
5	Mark Fleming	Senior Vice President, Chief Economist	First American Financial Corporation
6	Ingo Winzer	President	Local Market Monitor
7	Michael Englund	Chief Economist	Action Economics LLC
8	Barry Habib	CEO	MBS Highway
9	James Smith	Chief Economist	Parsec Financial Management
10	Stephen Stanley	Chief Economist	Amherst Pierpont Securities

Benchmark: US ZHVI <b>34.25%</b>				
Panelist Expectations, By Survey Edition:				
Q1 2017	Q2 2017	Q3 2017	Q4 2017	
20.23%	17.76%	17.87%	17.65%	
20.79%	16.04%	17.42%	15.76%	
15.72%	15.16%	17.31%	17.96%	
16.43%	16.43%	16.76%	13.68%	
11.68%	17.98%	17.98%	15.43%	
17.09%	15.65%	14.01%	14.65%	
14.88%	14.88%	15.21%	15.32%	
15.86%	16.50%	13.96%	13.34%	
14.32%	14.32%	14.32%	14.32%	
11.19%	15.65%	14.11%	13.24%	

4-Year Horizon (Dec 2021 / Dec 2017)

2018 Expectations

Rank	Panelist	Title	Affiliation
1	Jim Kleckley	Director, Bureau of Business Research	East Carolina University
2	Edward Pinto	Resident Fellow	American Enterprise Institute
3	Grant Thrall	President	American Real Estate Society
4	Mark Fleming	Senior Vice President, Chief Economist	First American Financial Corporation
5	Douglas Holtz-Eakin	President	American Action Forum
6	Raymond Hodgdon	CEO	Enlightened Economics
7	Nathaniel Karp	Chief U.S. Economist	BBVA Research
8	Matthew Fienup	Economist, Economic Forecasting and Research Center	California Lutheran Univ. Ctr for Economic Forecasting & Research
9	Michael Englund	Chief Economist	Action Economics LLC
10	Stacy Sirmans	Director	FSU Center for Real Estate Education & Research

Benchmark: US ZHVI <b>42.32%</b>				
Panelist Expectations, By Survey Edition:				
Q1 2018	Q2 2018	Q3 2018	Q4 2018	
27.92%	32.23%	29.80%	30.20%	
26.59%	33.16%	28.87%	28.02%	
19.02%	46.40%	34.48%	22.58%	
32.30%	22.71%	30.46%	22.47%	
23.28%	26.83%	31.65%	25.05%	
25.06%	33.92%	16.20%	30.96%	
18.43%	26.47%	32.67%	20.69%	
21.54%	24.70%	26.48%	25.17%	
22.83%	25.88%	25.29%	22.35%	
24.47%	22.12%	25.06%	24.47%	

2017 Expectations

Rank	Panelist	Title	Affiliation
1	Raymond Hodgdon	CEO	Enlightened Economics
2	Stacy Sirmans	Director	FSU Center for Real Estate Education & Research
3	Mark Fleming	Senior Vice President, Chief Economist	First American Financial Corporation
4	Jim Kleckley	Director, Bureau of Business Research	East Carolina University
5	Matthew Fienup	Economist, Economic Forecasting and Research Center	California Lutheran Univ. Ctr for Economic Forecasting & Research
6	Michael Englund	Chief Economist	Action Economics LLC
7	Ingo Winzer	President	Local Market Monitor
8	James Smith	Chief Economist	Parsec Financial Management
9	Barry Habib	CEO	MBS Highway
10	Stephen Stanley	Chief Economist	Amherst Pierpont Securities

Benchmark: US ZHVI <b>42.32%</b>				
Panelist Expectations, By Survey Edition:				
Q1 2017	Q2 2017	Q3 2017	Q4 2017	
28.64%	24.47%	24.59%	24.71%	
28.04%	22.42%	24.46%	22.71%	
16.14%	26.24%	25.35%	24.43%	
21.47%	20.82%	24.12%	25.14%	
22.83%	22.83%	23.41%	20.16%	
21.20%	21.20%	21.55%	21.78%	
23.18%	21.43%	18.79%	22.10%	
20.49%	20.49%	20.49%	20.49%	
21.31%	21.28%	20.46%	18.32%	
16.20%	22.36%	20.39%	19.47%	

# HOME PRICE EXPECTATIONS SURVEY

## Top-10 Rankings for 2021

5-Year Horizon (Dec 2021/ Dec 2016)

Benchmark: US ZHVI **51.60%**

2017 Expectations

Rank	Panelist	Title	Affiliation	Panelist Expectations, By Survey Edition:			
				Q1 2017	Q2 2017	Q3 2017	Q4 2017
1	Raymond Hodgdon	CEO	Enlightened Economics	37.01%	32.19%	32.31%	32.81%
2	Stacy Sirmans	Director	FSU Center for Real Estate Education & Research	35.09%	29.46%	31.31%	30.68%
3	Mark Fleming	Senior Vice President, Chief Economist	First American Financial Corporation	21.37%	33.81%	33.50%	35.63%
4	Jim Kleckley	Director, Bureau of Business Research	East Carolina University	28.73%	27.24%	32.06%	33.05%
5	Matthew Fienup	Economist, Economic Forecasting and Research Center	California Lutheran Univ. Ctr for Economic Forecasting & Research	29.83%	29.83%	31.43%	28.57%
6	Michael Englund	Chief Economist	Action Economics LLC	28.47%	28.47%	28.84%	29.33%
7	Ingo Winzer	President	Local Market Monitor	29.34%	27.63%	25.33%	30.65%
8	Barry Habib	CEO	MBS Highway	28.71%	28.80%	28.17%	25.66%
9	James Smith	Chief Economist	Parsec Financial Management	27.36%	27.36%	27.36%	27.36%
10	Stephen Stanley	Chief Economist	Amherst Pierpont Securities	22.59%	30.07%	28.22%	27.24%

### Ranking Eligibility

Panelists eligible for a 2021 ranking were those who participated in at least one of the four 2021 quarterly surveys AND in all four of the quarterly surveys that comprise a given year's set of expectations data (e.g., to be eligible for a 2021 award pertaining to expectations made in 2018, a panelist would have had to submit forecast data for each of the four quarterly surveys that Pulseonomics conducted in 2018).

### Ranking Methodology

The expectations data submitted by eligible panelists for each of the four survey editions in each calendar year were compared to the actual (Q4/Q4, or Dec/Dec) home price percentage changes for the five time horizons that ended in 2021:

Time Horizon	Expectations Vintage(s)
2021 (1 year horizon)	2021
2020-2021 (2 year horizon)	2017, 2018, 2019, 2020
2019-2021 (3 year horizon)	2017, 2018, 2019
2018-2021 (4 year horizon)	2017, 2018
2017-2021 (5 year horizon)	2017

Rankings are based on a comparison of each panelist's expectations for home price changes to the actual change as measured by the Zillow U.S. Home Value Index ("ZHVI", the survey benchmark).

For each time horizon and expectations vintage, the sum of the absolute differences between (a) each of the four sets of quarterly expectations data submitted by eligible panelists in a calendar year and (b) the actual (Dec/Dec) percentage change in the applicable benchmark data was computed. These sums were then sorted in ascending order to generate rankings (i.e., the lowest sum represents the least average error/highest rank).