

HOME PRICE EXPECTATIONS SURVEY

Top-10 Rankings for 2017

1-Year Horizon (Dec 2017 / Dec 2016)				Benchmark: US ZHVI 6.50%				
Rank	Panelist	Title	Affiliation	Survey Edition				
				Q1 17	Q2 17	Q3 17	Q4 17	
2017 Expectations	1	Raymond Hodgdon	CEO	Enlightened Economics	6.50%	6.20%	6.20%	6.50%
	2	Kathy Bostjancic / Gregory Daco	Head of U.S. Macro Inv Svc / Head of U.S. Macroec	Oxford Economics	6.00%	6.60%	6.30%	6.20%
	3	Barry Habib	CEO	MBS Highway	6.10%	6.20%	6.40%	6.20%
	4	Stephen Stanley	Chief Economist	Amherst Pierpont Securities	5.50%	6.30%	6.50%	6.50%
	5	Edward Pinto	Resident Fellow	American Enterprise Institute	6.00%	6.00%	6.80%	6.80%
	6	Michael Carliner	Housing Economist	Independent Consultant	5.50%	6.10%	6.40%	6.70%
	7	Michael Englund	Chief Economist	Action Economics LLC	6.00%	6.00%	6.00%	6.20%
	8	Joel Naroff	President	Naroff Economic Advisors Inc	6.70%	6.70%	7.30%	7.30%
	9	Jim Kleckley	Director, Bureau of Business Research	East Carolina University	5.98%	5.31%	6.40%	6.32%
	10	Matthew Pointon	Property Economist	Capital Economics Ltd	6.00%	6.00%	6.00%	6.00%

2-Year Horizon (Dec 2017 / Dec 2015)				Benchmark: US ZHVI 13.73%				
Rank	Panelist	Title	Affiliation	Panelist Expectations, By Survey Edition:				
				Q1 16	Q2 16	Q3 16	Q4 16	
2016 Expectations	1	Joel Naroff	President	Naroff Economic Advisors Inc	11.83%	12.25%	12.36%	12.78%
	2	Edward Pinto	Resident Fellow	American Enterprise Institute	9.72%	10.98%	11.30%	11.72%
	3	Barry Habib	CEO	MBS Highway	9.20%	12.04%	12.36%	10.14%
	4	Ingo Winzer	President	Local Market Monitor	9.41%	10.46%	10.88%	11.09%
	5	Bob Baur	Chief Global Economist	Principal Global Investors	10.25%	9.20%	11.30%	10.25%
	6	Mark Fleming	Senior Vice President, Chief Economist	First American Financial Corp	9.73%	9.72%	10.04%	11.20%
	7	Joseph Carson	Chief Economist	Alliance Bernstein	8.67%	10.25%	11.30%	9.20%
	8	Jim Kleckley	Director, Bureau of Business Research	East Carolina University	8.16%	10.08%	10.08%	10.76%
	9	Donald Haurin	Prof. of Economics, Finance, and Public Policy	Ohio State University	9.10%	8.99%	10.36%	10.57%
	10	Andrea Heuson	Professor of Finance	University of Miami	9.20%	10.25%	9.20%	10.25%

2015 Expectations				Benchmark: US ZHVI 13.73%				
Rank	Panelist	Title	Affiliation	Panelist Expectations, By Survey Edition:				
				Q1 15	Q2 15	Q3 15	Q4 15	
2015 Expectations	1	Joel Naroff	President	Naroff Economic Advisors Inc	13.45%	14.60%	13.73%	12.04%
	2	Rajeev Dhawan	Director, Economic Forecasting Center	Georgia State University	13.93%	13.91%	13.07%	15.99%
	3	Ingo Winzer	President	Local Market Monitor	10.60%	11.41%	11.41%	8.89%
	4	Paul Carrillo	Professor of Economics	George Washington University	10.28%	10.77%	10.25%	10.25%
	5	David Wyss	Economist	Brown University	11.87%	11.30%	9.20%	8.16%
	6	Robert Dye	Chief Economist	Comerica Bank	10.91%	10.25%	7.95%	11.09%
	7	Michael Englund	Chief Economist	Action Economics LLC	10.70%	9.83%	9.94%	9.41%
	8	Peter Linneman	Founder and CEO	American Land Fund	9.75%	9.20%	10.25%	8.68%
	9	Amy Crews Cutts	Chief Economist	Equifax	9.75%	8.68%	10.56%	8.47%
	10	Jim Kleckley	Director, Bureau of Business Research	East Carolina University	10.80%	9.53%	8.10%	7.89%

2014 Expectations				Benchmark: US ZHVI 13.73%				
Rank	Panelist	Title	Affiliation	Panelist Expectations, By Survey Edition:				
				Q1 14	Q2 14	Q3 14	Q4 14	
2014 Expectations	1	Ingo Winzer	President	Local Market Monitor	14.49%	14.49%	12.68%	11.72%
	2	Grant Thrall	President	American Real Estate Society	14.06%	14.06%	14.06%	7.77%
	3	Joel Naroff	President	Naroff Economic Advisors Inc	11.62%	11.62%	12.68%	11.29%
	4	Michael Englund	Chief Economist	Action Economics LLC	12.04%	12.04%	11.30%	10.36%
	5	Robert Dye	Chief Economist	Comerica Bank	10.25%	10.25%	11.51%	8.99%
	6	Don Rissmiller	Chief Investment Strategist	Strategas Research Partners LLC	10.25%	10.25%	10.25%	10.25%
	7	Rajeev Dhawan	Director, Economic Forecasting Center	Georgia State University	19.60%	19.60%	16.74%	13.36%
	8	Jim Kleckley	Director, Bureau of Business Research	East Carolina University	10.29%	10.29%	8.80%	9.66%
	9	Peter Linneman	Founder and CEO	American Land Fund	9.20%	9.20%	9.73%	10.25%
	10	Andrea Heuson	Professor of Finance	University of Miami	8.16%	8.16%	10.25%	10.25%

2013 Expectations				Benchmark: US ZHVI 13.73%				
Rank	Panelist	Title	Affiliation	Panelist Expectations, By Survey Edition:				
				Q1 13	Q2 13	Q3 13	Q4 13	
2013 Expectations	1	Ingo Winzer	President	Local Market Monitor	12.57%	12.36%	13.31%	13.53%
	2	David Wyss	Economist	Brown University	12.36%	13.42%	12.36%	13.42%
	3	Jack Kleinhenz	Chief Economist	Kleinhenz & Associates, Inc.	12.36%	12.36%	12.31%	12.31%
	4	Chris Mayer	Sr Vice Dean, Paul Milstein Professor of Real Estate	Columbia Business School	10.25%	13.42%	13.42%	11.30%
	5	Jim Kleckley	Director, Bureau of Business Research	East Carolina University	12.72%	11.39%	11.64%	10.15%
	6	Michael Englund	Chief Economist	Action Economics LLC	10.46%	11.20%	11.20%	11.51%
	7	Don Rissmiller	Chief Investment Strategist	Strategas Research Partners LLC	11.30%	10.25%	12.35%	10.25%
	8	Allen Sinai	President, CEO, Chief Global Economist & Strategist	Decision Economics	10.46%	10.67%	11.83%	10.57%
	9	Andrea Heuson	Professor of Finance	University of Miami	12.36%	10.25%	10.25%	8.16%
	10	Carlos Garriga	Senior Economist	Federal Reserve Bank of St. Louis	7.64%	12.89%	8.68%	11.30%

HOME PRICE EXPECTATIONS SURVEY

Top-10 Rankings for 2017

3-Year Horizon (Dec 2017 / Dec 2014)				Benchmark: US ZHVI 20.01%				
Rank	Panelist	Title	Affiliation	Panelist Expectations, By Survey Edition:				
				Q1 15	Q2 15	Q3 15	Q4 15	
2015 Expectations	1	Rajeev Dhawan	Director, Economic Forecasting Center	Georgia State University	20.20%	20.17%	18.50%	20.86%
	2	Joel Naroff	President	Naroff Economic Advisors Inc	19.47%	21.36%	20.67%	19.21%
	3	Ingo Winzer	President	Local Market Monitor	17.56%	17.54%	16.53%	14.55%
	4	Paul Carrillo	Professor of Economics	George Washington University	16.34%	16.86%	16.31%	15.21%
	5	Michael Englund	Chief Economist	Action Economics LLC	16.34%	16.20%	15.43%	14.01%
	6	Barry Habib	CEO	MBS Highway	11.95%	17.29%	17.08%	14.87%
	7	Joseph Carson	Chief Economist	Alliance Bernstein	15.23%	15.75%	15.19%	14.66%
	8	David Wyss	Economist	Brown University	16.34%	16.87%	15.21%	11.62%
	9	Peter Linneman	Founder and CEO	American Land Fund	15.23%	14.66%	15.76%	14.11%
	10	Edward Pinto	Resident Fellow	American Enterprise Institute	14.14%	13.57%	15.19%	13.79%
3-Year Horizon (Dec 2017 / Dec 2014)				Benchmark: US ZHVI 20.01%				
Rank	Panelist	Title	Affiliation	Panelist Expectations, By Survey Edition:				
				Q1 14	Q2 14	Q3 14	Q4 14	
2014 Expectations	1	Michael Englund	Chief Economist	Action Economics LLC	19.55%	19.55%	17.98%	15.76%
	2	Ingo Winzer	President	Local Market Monitor	23.19%	23.19%	21.46%	19.77%
	3	Joel Naroff	President	Naroff Economic Advisors Inc	17.09%	17.09%	18.09%	16.85%
	4	Grant Thrall	President	American Real Estate Society	22.16%	22.16%	22.16%	12.40%
	5	Peter Linneman	Founder and CEO	American Land Fund	14.66%	14.66%	17.41%	16.87%
	6	Rajeev Dhawan	Director, Economic Forecasting Center	Georgia State University	26.18%	26.18%	22.70%	18.46%
	7	Don Rissmiller	Chief Investment Strategist	Strategas Research Partners LLC	15.76%	15.76%	15.76%	15.76%
	8	Andrea Heuson	Professor of Finance	University of Miami	13.57%	13.57%	16.87%	16.87%
	9	Jim Kleckley	Director, Bureau of Business Research	East Carolina University	15.71%	15.71%	13.94%	15.29%
	10	Amy Crews Cutts	Chief Economist	Equifax	13.57%	13.57%	16.08%	14.94%
3-Year Horizon (Dec 2017 / Dec 2014)				Benchmark: US ZHVI 20.01%				
Rank	Panelist	Title	Affiliation	Panelist Expectations, By Survey Edition:				
				Q1 13	Q2 13	Q3 13	Q4 13	
2013 Expectations	1	Ingo Winzer	President	Local Market Monitor	19.44%	19.33%	19.55%	21.59%
	2	Jack Kleinhenz	Chief Economist	Kleinhenz & Associates, Inc.	19.10%	19.10%	18.88%	18.88%
	3	David Wyss	Economist	Brown University	21.35%	21.36%	21.35%	22.49%
	4	Michael Englund	Chief Economist	Action Economics LLC	16.65%	18.42%	18.20%	19.32%
	5	Jim Kleckley	Director, Bureau of Business Research	East Carolina University	19.68%	17.56%	17.96%	15.65%
	6	Chris Mayer	Sr Vice Dean, Paul Milstein Professor of Real Estate	Columbia Business School	17.97%	19.09%	19.09%	14.64%
	7	Don Rissmiller	Chief Investment Strategist	Strategas Research Partners LLC	17.98%	15.76%	20.21%	15.76%
	8	Allen Sinai	President, CEO, Chief Global Economist & Strategist	Decision Economics	14.55%	14.88%	17.98%	16.54%
	9	Andrea Heuson	Professor of Finance	University of Miami	17.98%	15.76%	16.87%	12.49%
	10	Carlos Garriga	Senior Economist	Federal Reserve Bank of St. Louis	11.08%	19.66%	13.03%	17.42%
4-Year Horizon (Dec 2017 / Dec 2013)				Benchmark: US ZHVI 25.18%				
Rank	Panelist	Title	Affiliation	Panelist Expectations, By Survey Edition:				
				Q1 14	Q2 14	Q3 14	Q4 14	
2014 Expectations	1	Joel Naroff	President	Naroff Economic Advisors Inc	23.29%	23.29%	24.46%	22.46%
	2	Peter Linneman	Founder and CEO	American Land Fund	20.39%	20.39%	25.62%	23.41%
	3	Michael Englund	Chief Economist	Action Economics LLC	29.11%	29.11%	25.89%	21.20%
	4	Rajeev Dhawan	Director, Economic Forecasting Center	Georgia State University	29.33%	29.33%	28.22%	23.20%
	5	Don Rissmiller	Chief Investment Strategist	Strategas Research Partners LLC	22.71%	22.71%	20.39%	20.97%
	6	Jim Kleckley	Director, Bureau of Business Research	East Carolina University	22.12%	22.12%	19.76%	22.36%
	7	Andrea Heuson	Professor of Finance	University of Miami	19.25%	19.25%	23.88%	23.88%
	8	Amy Crews Cutts	Chief Economist	Equifax	20.38%	20.38%	23.16%	20.97%
	9	James Smith	Chief Economist	Parsec Financial Management	20.94%	20.94%	20.94%	20.94%
	10	Ingo Winzer	President	Local Market Monitor	33.17%	33.17%	28.75%	26.71%
4-Year Horizon (Dec 2017 / Dec 2013)				Benchmark: US ZHVI 25.18%				
Rank	Panelist	Title	Affiliation	Panelist Expectations, By Survey Edition:				
				Q1 13	Q2 13	Q3 13	Q4 13	
2013 Expectations	1	Jack Kleinhenz	Chief Economist	Kleinhenz & Associates, Inc.	25.65%	25.95%	25.71%	25.71%
	2	Jim Kleckley	Director, Bureau of Business Research	East Carolina University	27.51%	24.68%	25.25%	21.72%
	3	Ingo Winzer	President	Local Market Monitor	24.57%	24.46%	24.09%	29.98%
	4	Chris Mayer	Sr Vice Dean, Paul Milstein Professor of Real Estate	Columbia Business School	25.05%	26.24%	26.24%	18.08%
	5	Don Rissmiller	Chief Investment Strategist	Strategas Research Partners LLC	23.88%	22.71%	27.43%	21.55%
	6	Michael Englund	Chief Economist	Action Economics LLC	23.88%	30.15%	26.95%	29.34%
	7	Andrea Heuson	Professor of Finance	University of Miami	23.88%	21.55%	23.88%	18.11%
	8	Allen Sinai	President, CEO, Chief Global Economist & Strategist	Decision Economics	18.67%	19.01%	24.23%	23.06%
	9	Joseph Carson	Chief Economist	Alliance Bernstein	21.55%	22.71%	19.25%	20.39%
	10	James Smith	Chief Economist	Parsec Financial Management	20.94%	20.94%	20.94%	20.94%

HOME PRICE EXPECTATIONS SURVEY

Top-10 Rankings for 2017

5-Year Horizon (Dec 2017 / Dec 2012)				Benchmark: US ZHVI		32.84%		
Rank	Panelist	Title	Affiliation	Survey Edition				
				Q1 13	Q2 13	Q3 13	Q4 13	
2013 Expectations	1	Jack Kleinhenz	Chief Economist	Kleinhenz & Associates, Inc.	32.56%	33.19%	32.94%	32.94%
	2	Chris Mayer	Sr Vice Dean, Paul Milstein Professor of Real Estate	Columbia Business School	32.55%	32.55%	32.55%	25.16%
	3	Don Rissmiller	Chief Investment Strategist	Strategas Research Partners LLC	30.07%	28.84%	33.80%	31.27%
	4	James Smith	Chief Economist	Parsec Financial Management	30.37%	30.37%	30.37%	30.37%
	5	Jim Kleckley	Director, Bureau of Business Research	East Carolina University	37.75%	31.43%	32.99%	28.70%
	6	Joseph Carson	Chief Economist	Alliance Bernstein	30.06%	28.84%	28.79%	30.02%
	7	Andrea Heuson	Professor of Finance	University of Miami	30.07%	27.63%	30.07%	25.20%
	8	Ingo Winzer	President	Local Market Monitor	26.94%	26.82%	27.69%	37.77%
	9	Brad Hunter	Chief Economist	HomeAdvisor	21.78%	33.09%	34.15%	23.37%
	10	Allen Sinai	President, CEO, Chief Global Economist & Strategist	Decision Economics	22.82%	23.18%	30.57%	30.20%

Ranking Eligibility

Panelists eligible for a 2017 ranking were those who participated in at least one of the four 2017 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 2017 award pertaining expectations made in 2015, a panelist would have had to submit forecast data for each of the four quarterly surveys that Pulsenomics conducted in 2015).

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 2017:

Time Horizon	Expectations Vintage(s)
2017 (1 year horizon)	2017
2016-2017 (2 year horizon)	2013, 2014, 2015, 2016
2015-2017 (3 year horizon)	2013, 2014, 2015
2014-2017 (4 year horizon)	2013, 2014
2013-2017 (5 year horizon)	2013

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 (US ZHVI) using the index values published on Jan. 18, 2018.

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).