



2015 CRYSTAL BALL AWARD WINNERS

In Recognition of Outstanding Performance in The Zillow® Home Price Expectations Survey

FIRST PLACE WINNERS			
Horizon	Year That Expectations Were Made	Panelist(s)	Affiliation
5 Year (2011-2015)	2011	Joel Naroff	Naroff Economic Advisors Inc
4 Year (2012-2015)	2011	Nariman Behraves / Patrick Newport	IHS Global Insight
	2012	James Smith	Parsec Financial Management
3 Year (2013-2015)	2011	Nariman Behraves / Patrick Newport	IHS Global Insight
	2012	Rajeev Dhawan	Georgia State University
	2013	Michael Carliner	Independent Consultant
2 Year (2014-2015)	2011	Rajeev Dhawan	Georgia State University
	2012	James Smith	Parsec Financial Management
	2013	Bruce McCain	KeyBank
	2014	Mike Cosgrove	The Econoclast
1 Year (2015)	2015	Vijay Bhasin	Essent U.S. Holdings
		Edward Pierzak	TIAA-CREF

OUTSTANDING CONSISTENCY			
For the 11 performance categories:			
Number of Top-5 Rankings	Number of Top-10 Rankings*	Panelist(s)	Affiliation
5	9	M. Zandi / C. Chen / A. Carbacho-Burgos	Moody's Analytics
5	8	Rajeev Dhawan	Georgia State University
5	5	Joel Naroff	Naroff Economic Advisors Inc
4	7	Brian Wesbury / Robert Stein	First Trust Advisors
4	6	Stephen Stanley	Amherst Pierpont Securities
3	7	Andrea Heuson	University of Miami

*Inclusive of the Top-5 ranking counts shown in the first column.

Ranking Eligibility

Panelists eligible for a 2015 ranking were those who participated in at least one of the four 2015 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 2015 award pertaining to expectations made in 2013, a panelist would have had to submit forecast data for each of the four quarterly surveys that Pulseonomics conducted in 2013).

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 2015:

Time Horizon	Expectations Vintage(s)
2015 (1 year horizon)	2015
2014-2015 (2 year horizon)	2011, 2012, 2013, 2014
2013-2015 (3 year horizon)	2011, 2012, 2013
2012-2015 (4 year horizon)	2011, 2012
2011-2015 (5 year horizon)	2011

Rankings are based on a comparison of each panelist's expectations for home price changes to the actual change as measured by the applicable survey benchmark used at the time the expectations data was submitted (i.e., S&P/Case-Shiller U.S. National HPI for pre-2013 expectations, and the Zillow U.S. Home Value Index for 2013-2015 expectations). These calculations are based upon the respective benchmark index values as published by Standard & Poor's and Zillow on 2/23/2016.

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).