pulsenomics®

2014 CRYSTAL BALL AWARD WINNERS

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

FIRST PLACE		
Doug Duncan	Fannie Mae	**1 Year Horizon** (2014) 2014 Expectations
James Smith	Parsec Financial Management	**2-Year Horizon** (2013-2014) 2013 Expectations
Abdullah Yavas	University of Wisconsin - Madison	**2-Year Horizon** (2013-2014) 2012 Expectations
Mark Zandi / Celia Chen	Moody's Analytics	**2-Year Horizon** (2013-2014) 2011 Expectations
Chris Mayer	Columbia Business School	**2-Year Horizon** (2013-2014) 2010 Expectations
James Smith	Parsec Financial Management	**3-Year Horizon** (2012-2014) 2012 Expectations
Thomas Lawler	Lawler Economic & Housing Outlook	**3-Year Horizon** (2012-2014) 2011 Expectations
Nariman Behravesh / Patrick Newport	IHS Global Insight	**3-Year Horizon** (2012-2014) 2010 Expectations
Thomas Lawler	Lawler Economic & Housing Outlook	**4-Year Horizon** (2011-2014) 2011 Expectations
James Smith	Parsec Financial Management	**4-Year Horizon** (2011-2014) 2010 Expectations
Joe Carson	Alliance Bernstein	**5-Year Horizon** (2010-2014) 2010 Expectations

These first place winners were also the runner-up in one or more categories:

- Nariman Behravesh & Patrick Newport were the runners-up for their expectations in 2010 for the 2013-2014 (2-year) horizon, and for their expectations in 2011 for the 2012-2014 (3-year) horizon
- Doug Duncan was runner-up for his expectations in 2010 for the 2012-2014 (3-year) horizon
- Thomas Lawler was runner-up for his expectations in both 2011 and 2012 for the 2013-2014 (2-year) horizon

HONORABLE MENTION		
Amy Crews Cutts	Equifax	Runner-up: 1-Year Horizon (2014) 2014 Expectations
Bob Baur	Principal Global Investors	Runner-up: 2-Year Horizon (2013-2014) 2013 Expectations
Stephen Stanley	Amherst Pierpont Securities	Runner-up: 3-Year Horizon (2012-2014) 2012 Expectations
Brian Wesbury / Robert Stein	First Trust Advisors	Runner-up: 4-Year Horizon (2011-2014) 2011 Expectations
Jim O'Sullivan	High Frequency Economics	Runner-up: 4-Year Horizon (2011-2014) 2010 Expectations
Andrea Heuson	University of Miami	Runner-up: 5-Year Horizon (2010-2014) 2010 Expectations

Ranking Eligibility

Panelists who participated in all four of the quarterly surveys that comprise a given calendar year's set of expecations data and who also participated in at least one of the quarterly surveys during 2014.

For 2010, when the survey was conducted monthly, panelists who submitted home price expectations for each of the May, June, September and December editions of the survey in 2010 are considered. (The May 2010 edition of the survey was the inaugural installment, and it was conducted during a timeframe when the then latest available benchmark HPI data was a/o the preceding fourth quarter, the same reference data that would have been accessible by the panelists had the survey been conducted in March 2010. Thus, the data labelled "Q1 2010" within

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 2014:

Time Horizon	Expectations Vintage(s)
2014 (1 year horizon)	2014
2013-2014 (2 year horizon)	2010, 2011, 2012, 2013
2012-2014 (3 year horizon)	2010, 2011, 2012
2011-2014 (4 year horizon)	2010, 2011
2010-2014 (5 year horizon)	2010

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 expecations 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 and 2014 expectations). These calculations are based upon the respective benchmark index values as published by Standard & Poor's on 2/24/2015 and by Zillow on 2/20/2015.

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) .