



HOME PRICE EXPECTATIONS SURVEY RESULTS: First Quarter 2017

Panelist	Title	Affiliation	Response Date	Estimated Home Price Performance (Dec/Dec)					Cumulative				
				2017	2018	2019	2020	2021	2017	2018	2020	2021	
Scott Anderson	Chief Economist	Bank of The West	1/25/17	5.20%	4.20%	3.90%	3.80%	2.90%	5.20%	9.62%	13.89%	18.22%	21.65%
Daniel Bachman	Senior Manager, U.S. Economics	Deloitte Services, LP	2/1/17	5.60%	3.80%	2.50%	1.60%	2.00%	5.60%	9.61%	12.35%	14.15%	16.43%
Christophe Barraud	Chief Economist & Strategist	Market Securities	1/30/17	6.50%	6.00%	2.00%	-2.00%	0.00%	6.50%	12.89%	15.15%	12.84%	12.84%
Bob Baur	Chief Global Economist	Principal Global Investors	1/26/17	3.50%	3.30%	3.00%	3.40%	3.30%	3.50%	6.92%	10.11%	13.87%	17.62%
Nariman Behravesh	Chief Economist	FHS Global Insight	2/2/17	5.00%	3.50%	3.00%	2.50%	2.50%	5.00%	8.68%	11.94%	14.73%	17.60%
El Beracha	Assistant Professor	Florida International University	1/25/17	5.90%	5.10%	4.50%	3.70%	3.20%	5.90%	11.30%	16.31%	20.61%	24.47%
David Berson	Chief Economist	Nationwide Insurance	1/25/17	4.50%	5.00%	4.00%	4.00%	4.00%	4.50%	9.73%	14.11%	18.68%	23.43%
Vijay Bhanu	Chief Risk Officer	Essent U.S. Holdings	2/2/17	4.00%	7.10%	2.10%	-1.00%	-3.00%	4.00%	11.38%	13.72%	12.59%	9.21%
Daren Blomquist	Senior Vice President	ATTOM Data Solutions	1/30/17	6.00%	5.70%	4.50%	2.50%	1.00%	6.00%	12.04%	17.08%	20.01%	21.21%
Kathy Bostjanic / Gregory Daco	Head of U.S. Macro Investors Service / Head of U.S. Macroeconomics	Oxford Economics	1/30/17	5.90%	4.20%	1.10%	-1.70%	-3.50%	5.90%	10.35%	11.56%	9.67%	5.83%
Mark Bower	Chief Economist	Metrostudy	1/25/17	5.40%	4.20%	3.50%	3.50%	3.00%	5.40%	9.83%	13.67%	17.65%	21.18%
Beth Ann Bovino	Chief Economist	Standard & Poor's	2/3/17	3.90%	3.50%	3.30%	3.10%	2.90%	3.90%	7.54%	11.09%	14.53%	17.85%
Beata Caranci	Chief Economist	TD Bank Group	2/3/17	5.50%	3.50%	2.75%	2.75%	2.75%	5.50%	9.19%	12.20%	15.28%	18.45%
Michael Carliner	Housing Economist	Independent Consultant	2/5/17	5.00%	4.50%	4.50%	4.50%	4.50%	5.00%	9.73%	14.66%	19.82%	25.21%
Paul Carrillo	Professor of Economics	George Washington University	1/30/17	4.60%	3.20%	2.80%	2.80%	3.00%	4.60%	7.95%	10.97%	13.85%	17.27%
Sam Chandan	President	Chandran Economics	2/6/17	5.50%	4.80%	4.90%	5.10%	6.00%	5.50%	10.56%	15.98%	21.90%	29.21%
John Chang	First Vice President, Research Services	Marcus & Millichap Real Estate Investment Services	1/30/17	4.00%	3.00%	3.00%	2.50%	2.50%	4.00%	7.12%	10.33%	13.09%	15.92%
Sherwood Clements	Instructor of Real Estate	Culverhouse College of Commerce	1/30/17	3.50%	2.80%	2.00%	2.00%	1.00%	3.50%	6.40%	8.53%	10.70%	11.80%
Mike Cosgrove	Principal	The Colocast	2/1/17	4.00%	4.00%	3.50%	3.00%	3.00%	4.00%	8.16%	11.95%	15.30%	18.70%
Marsha Courchane	Director, Financial Economics	CRA International	1/25/17	5.40%	5.00%	4.00%	4.00%	4.00%	5.40%	10.67%	15.10%	19.70%	24.40%
Kevin Cummins	U.S. Economist	RBS	2/6/17	-2.75%	-1.50%	3.50%	5.20%	3.50%	-2.75%	-4.21%	-0.86%	4.30%	7.95%
Rajiv De Franco	Global Chief Economist	Arch Capital Services Inc.	2/1/17	3.40%	-2.00%	-5.00%	-1.00%	3.00%	3.40%	1.33%	-3.7%	-4.70%	-1.84%
Rajesh Dhanwan	Director, Economic Forecasting Center	Georgia State University	1/26/17	2.75%	2.50%	2.25%	2.25%	2.25%	2.75%	5.32%	7.69%	10.11%	12.50%
Daniele DiMartino Booth	President	Money Street LLC	2/1/17	3.75%	3.25%	2.50%	3.00%	3.00%	3.75%	6.86%	9.54%	12.82%	16.21%
John Dolan	Real Estate Finance Professor	Second Order Strategies, Inc.	2/1/17	4.20%	4.20%	4.20%	4.20%	4.20%	4.20%	8.40%	12.60%	16.80%	21.00%
David Downs	Chief Economist	Virginia Commonwealth University	2/1/17	6.00%	5.50%	5.00%	4.70%	4.50%	6.00%	11.83%	17.42%	22.94%	28.47%
Doug Dunstan	Chief Economist	Fannie Mae	1/29/17	5.00%	4.00%	3.50%	2.50%	2.50%	5.00%	9.20%	13.02%	15.85%	18.74%
Michael Englund	Chief Economist	Action Economics LLC	1/25/17	5.70%	5.50%	5.30%	5.20%	5.10%	5.70%	11.51%	17.42%	23.53%	29.83%
Craig Evers	Economist	Brean Howard	2/2/17	4.00%	4.00%	3.50%	2.50%	2.50%	4.00%	8.26%	11.51%	14.52%	17.84%
Christy Fields	Director, Real Estate Consulting	Pension Consulting Alliance, Inc.	1/30/17	4.40%	2.80%	0.80%	-1.20%	2.10%	4.40%	7.32%	8.18%	6.88%	9.13%
Matthew Flunp	Economist, Economic Forecasting and Research Center	Lutheran Univ. Ctr for Economic Forecasting & Research	1/30/17	5.50%	5.00%	4.00%	4.00%	4.00%	5.50%	10.78%	12.99%	18.08%	22.80%
Maria Florini Ramirez	Chief Executive Officer	MPF, Inc.	2/1/17	4.50%	4.00%	3.75%	3.75%	3.75%	4.50%	8.68%	12.76%	16.98%	21.37%
Mark Fleming	Senior Vice President, Chief Economist	First American Financial Corporation	1/29/17	5.50%	5.00%	2.00%	4.00%	4.00%	5.50%	10.78%	12.99%	18.08%	22.80%
James Gaines	Chief Economist	Texas A&M University Real Estate Center	1/28/17	4.30%	3.80%	3.00%	2.70%	2.90%	4.30%	8.26%	11.51%	14.52%	17.84%
Bodhi Ganguli	Senior Economist	Dun & Bradstreet, Inc.	2/3/17	4.40%	2.80%	0.80%	-1.20%	2.10%	4.40%	7.32%	8.18%	6.88%	9.13%
Matthew Gardner	Chief Economist	Windermere Real Estate Company	1/29/17	5.50%	4.50%	3.00%	3.00%	3.00%	5.50%	10.25%	13.55%	16.96%	20.47%
Carlos Garriga	Senior Economist	Federal Reserve Bank of St. Louis	2/6/17	4.00%	4.00%	3.00%	3.00%	3.00%	4.00%	8.16%	11.95%	15.30%	18.70%
Barry Hays	Chief Investment Officer	Soluris Asset Management LLC	1/29/17	6.10%	4.70%	3.80%	5.90%	5.40%	6.10%	11.09%	15.31%	22.11%	28.71%
Timothy Healey	CEO	MBS Highway	1/25/17	2.50%	3.00%	3.00%	2.00%	3.00%	2.50%	5.58%	8.74%	10.92%	14.24%
Marc Halle	Chief Investment Officer and Senior Portfolio Manager	PGIM Real Estate	1/30/17	-4.00%	-8.20%	-7.50%	-5.00%	0.00%	-4.00%	-11.87%	-18.48%	-22.97%	-22.97%
Mark Hanson	Founder	Hanson Advisors	1/30/17	2.85%	1.50%	4.25%	3.75%	3.50%	2.85%	4.39%	8.83%	12.91%	16.80%
Richard Hastings	Macro Strategist	Sequoia Global Securities LLC	1/25/17	5.50%	5.10%	4.10%	3.80%	3.80%	5.50%	10.57%	15.10%	19.47%	24.01%
Donald Heuryn	Professor of Economics, Finance, and Public Policy	Oho State University	1/30/17	4.00%	4.00%	3.00%	3.00%	3.00%	4.00%	8.16%	11.95%	15.30%	18.70%
Raymond Hodgdon	Professor of Finance	University of Miami	1/29/17	6.50%	7.00%	6.50%	6.00%	6.50%	6.50%	13.96%	21.36%	28.64%	37.01%
Stuart Hoffman	Chief Economist	The PNC Financial Services Group	1/27/17	3.31%	3.02%	3.45%	3.30%	3.30%	3.31%	6.43%	10.10%	13.74%	17.49%
Douglas Holtz-Eakin	President	American Action Forum	1/27/17	5.25%	4.75%	4.00%	3.50%	3.00%	5.25%	10.25%	14.66%	18.67%	22.23%
Stan Humphries / Svenja Gudell	Chief Analytics Officer / Chief Economist	Zillow	2/3/17	5.35%	4.20%	3.50%	3.20%	2.70%	5.35%	9.77%	13.62%	17.25%	20.42%
Greg Hunter	Chief Economist	HonamAdvisor	1/29/17	3.75%	2.55%	2.60%	3.10%	3.30%	3.75%	6.40%	9.16%	12.57%	16.02%
Denis Igan	Senior Economist	International Monetary Fund	2/3/17	3.70%	3.00%	2.70%	2.50%	2.50%	3.70%	6.81%	9.69%	12.44%	15.25%
Parul Jain	Chief Investment Strategist	MacroFin Analytics LLC	2/3/17	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	6.00%	9.27%	12.55%	15.93%
Ken Johnson	Professor and Associate Dean	Natlata Atlantic University College of Business	1/26/17	3.80%	3.00%	3.00%	3.00%	3.00%	3.80%	7.43%	11.19%	15.08%	19.11%
Thomas Julien	U.S. Economist	Natixis	1/30/17	4.80%	4.10%	4.30%	3.00%	3.00%	4.80%	9.20%	13.90%	17.95%	23.01%
Nathaniel Kap	Chief U.S. Economist	BNA Research	2/1/17	5.98%	4.97%	4.98%	4.99%	4.99%	5.98%	11.25%	16.79%	22.62%	28.73%
Jim Kleckley	Director, Bureau of Business Research	East Carolina University	1/29/17	5.00%	5.00%	4.70%	4.00%	3.70%	5.00%	10.25%	15.43%	20.55%	24.49%
Jack Kleinhenz	Chief Economist	Kleinhenz & Associates, Inc.	2/1/17	5.60%	3.20%	2.50%	2.90%	3.20%	5.60%	8.98%	11.70%	14.94%	18.62%
Sibel Korkmaz	Economist	AIG Global Economics	2/6/17	6.00%	5.40%	4.50%	4.00%	3.00%	6.00%	11.72%	16.75%	21.42%	25.00%
Adolfo Laurenti	Global Economist	Bank J. Safra Sarasin Ltd	2/3/17	-2.00%	-5.00%	-1.00%	2.50%	2.50%	-2.00%	-6.90%	-9.57%	-12.62%	-12.1%
Peter Lineman	Founder and CEO	American Land Fund	1/25/17	4.00%	4.00%	3.00%	3.00%	3.00%	4.00%	8.16%	11.95%	15.30%	18.70%
Stephen Malpezzi	Principal, Macroeconomics and Housing	Forest Economic Advisors	1/29/17	4.00%	3.00%	3.00%	3.00%	3.00%	4.00%	7.12%	10.33%	13.09%	15.92%
Chris Mayer	Professor, James A. Graaskamp Center for Real Estate	University of Wisconsin School of Business	2/1/17	5.00%	4.00%	3.00%	2.00%	2.00%	5.00%	9.20%	12.48%	15.91%	
Bruce McCain	Sr Vice Dean, Paul Milstein Professor of Real Estate	Columbia Business School	2/3/17	5.00%	3.75%	3.75%	4.00%	4.00%	5.00%	8.94%	13.02%	17.54%	22.55%
James Meel	Chief Investment Strategist	KeyBank	2/3/17	4.60%	4.20%	3.90%	3.90%	3.20%	4.60%	8.99%	13.24%	17.66%	21.43%
Lynn Michaelis	Principal, Industry Analysis	ACT Research	1/25/17	4.00%	4.00%	3.00%	3.00%	2.50%	4.00%	8.16%	11.40%	14.75%	17.62%
George Mokran	Director of Economics	Huntington National Bank	2/6/17	6.00%	3.50%	2.50%	2.50%	2.50%	6.00%	9.71%	12.45%	15.26%	18.15%
Michael Moran	Chief Economist	Daewoo Capital Markets	1/30/17	6.70%	5.50%	4.20%	3.10%	5.30%	6.70%	12.57%	17.30%	20.93%	27.34%
Joel Naroff	President	MacroEcon Global Advisors	2/6/17	6.10%	5.30%	4.80%	4.20%	3.60%	6.10%	11.72%	17.09%	22.20%	26.40%
Mark Nielson	Chief U.S. Economist	High Frequency Economics	2/5/17	5.00%	3.00%	2.00%	2.00%	3.00%	5.00%	8.15%	10.31%	12.50%	15.89%
Jim O'Sullivan	Director of Research, Lusk Center for Real Estate	University of Southern California	2/6/17	5.00%	3.00%	3.00%	3.00%	3.00%	5.00%	8.15%	10.31%	12.50%	15.89%
Jim Painter	Associate Professor of Real Estate, Leeds School of Business	University of Colorado (Boulder)	1/30/17	4.20%	3.50%	3.00%	3.00%	3.00%	4.20%	7.85%	11.08%	14.11%	17.85%
Liang Peng	President	Pento Portfolio Strategies LLC	1/25/17	3.10%	-4.50%	1.20%	4.50%	6.90%	3.10%	-1.54%	-0.36%	4.13%	11.31%
Michael Pento	Chief Economist	Stifel Financial Corp.	1/30/17	4.50%	3.00%	2.50%	1.30%	-2.00%	4.50%	7.63%	10.33%	11.76%	9.52%
Lindsey Piegza	Resident Fellow	American Enterprise Institute	1/30/17	6.00%	6.00%	5.50%	4.00%	-3.00%	6.00%	12.36%	18.54%	23.28%	19.58%
Edward Pinto	Property Economist	Capital Economics Ltd	1/27/17	6.00%	2.00%	0.00%	2.00%	2.00%	6.00%	8.12%	8.12%	10.28%	12.49%
Matthew Pointon	Head of Research and Research	Bentall Kennedy	2/1/17	5.00%	4.00%	0.00%	1.00%	4.00%	5.00%	9.20%	10.29%	14.42%	17.60%
Douglas Poutasse	Chief Economist	Point Loma Nazarene University	1/27/17	5.00%	4.00%	3.00%	0.00%	-0.50%	5.00%	9.20%	12.48%	15.91%	
Lynne Reaser	Chief Economist	Stratagics Research Partners LLC	2/3/17	3.00%	1.00%	-1.00%	1.00%	2.00%	3.00%	4.03%	2.99%	4.02%	6.10%
Don Rissmiller	Chief Economist	BuildZoom	1/30/17	3.00%	2.40%	2.50%	1.00%	1.80%	3.00%	5.47%	8.11%	9.19%	11.16%
Issi Romem	Chairman	Rosen Consulting Group	1/31/17	5.00%	5.00%	4.00%	0.00%	-2.50%	5.00%	10.25%	14.66%	14.66%	11.79%
Kenneth Rosen	Chief Financial Economist	MUFJ Union Bank	2/1/17	4.00%	3.00%	3.00%	3.00%	3.00%	4.00%	7.12%	10.33%	13.09%	15.92%
Chris Ruspey	Chief Economist / Senior Economist	RIQ Economics	2/1/17	4.00%	2.50%	0.00%	-2.00%	0.00%	4.00%	6			