

# HOME PRICE EXPECTATIONS SURVEY

## Top-10 Rankings for 2024

	1-Year Horizon (Q4 2024 / Q4 2023)			Benchmark:			5.78%	
					Panelist	Expectation	s, By Survey	Edition:
R	ank	Panelist	<u>Title</u>	Affiliation	Q1 2024	Q2 2024	Q3 2024	Q4 2024
	1	Alexei Tchistyi	Associate Professor of Real Estate	Cornell SC Johnson College of Business	6.00%	6.00%	6.00%	6.00%
SI	2	Andra Ghent	Professor of Finance and Ivory-Boyer Chair in Real Estate	University of Utah	5.50%	6.00%	6.00%	6.00%
8	2 1	Douglas Holtz-Eakin	President	American Action Forum	6.50%	5.80%	6.50%	5.90%
tati	۱ '	Deniz Igan	Senior Economist	International Monetary Fund	6.20%	6.50%	6.00%	6.00%
ec ec	5	Matthew Fienup / Dan Hamilton	Executive Director / Director of Economics	Cal Lutheran University Ctr for Economic Research & Forecastin	4.80%	5.60%	5.50%	5.60%
Expe		Marc Halle	Chief Investment Officer	AFRE Capital, LLC	6.50%	6.00%	6.00%	6.50%
	6	TIE Barry Habib	CEO	MBS Highway	5.20%	5.20%	5.50%	6.20%
2024		Stacy Sirmans	Director	FSU Center for Real Estate Education & Research	6.00%	5.00%	5.50%	5.20%
	9	Igor Popov	Economist and Data Scientist	AirBnB	6.60%	5.50%	6.30%	6.10%
	10	Donald Haurin	Professor of Economics, Finance, and Public Policy	Ohio State University	3.90%	5.40%	5.80%	5.80%

		Stacy Sirmans	Director	FSU Center for Real Estate Education & Research	6.00%	5.00%	5.50%	5.20%
20	9	Igor Popov	Economist and Data Scientist	AirBnB	6.60%	5.50%	6.30%	6.10%
	10	Donald Haurin	Professor of Economics, Finance, and Public Policy	Ohio State University	3.90%	5.40%	5.80%	5.80%
				,				
1			2 1/2 1/2 1/2 1/2 1/2 1/2 1/2 1/2 1/2 1/					
			2-Year Horizon (Q4 2024 / Q4 2022)			Benchmark:	ļ.,,	10.48%
					Panelist	t Expectation	is, By Survey	y Edition:
	Rank	Panelist	Title	Affiliation	Q1 2023	Q2 2023	Q3 2023	Q4 2023
ĺ								
	1	Barry Habib	CEO	MBS Highway	8.47%	11.20%	11.61%	11.61%
S	2	Stacy Sirmans	Director	FSU Center for Real Estate Education & Research	8.16%	12.36%	11.30%	11.30%
ou	3	Alex Villacorta	Founder	Villacorta Consulting Group	8.68%	10.25%	13.41%	12.86%
ati	4	Alexei Tchistyi	Associate Professor of Real Estate	Cornell SC Johnson College of Business	9.20%	9.20%	12.36%	13.42%
Expectations	5	Matthew Fienup / Dan Hamilton	Executive Director / Director of Economics	Cal Lutheran University Ctr for Economic Research & Forecastin		7.23%	10.97%	10.24%
	6	Douglas Holtz-Eakin	President	American Action Forum	7.12%	7.59%	11.19%	11.30%
	7	Andrea Heuson	Professor of Finance	University of Miami	11.30%	10.78%	14.48%	13.42%
2023				,				
20	8	James Smith	Chief Economist	EconForecaster LLC	7.95%	7.95%	7.95%	9.93%
	9	James Gaines	Chief Economist	Texas A&M University Real Estate Center	8.15%	9.20%	9.20%	7.12%
	10	Sherwood Clements	Professor of Real Estate	Virginia Tech Pamplin College of Business	6.60%	6.60%	10.25%	12.34%
						Benchmark:		10.48%
						t Expectation		
	Rank	<u>Panelist</u>	<u>Title</u>	Affiliation	Q1 2022	Q2 2022	Q3 2022	Q4 2022
	1	Matthew Fienup / Dan Hamilton	Executive Director / Director of Economics	Cal Lutheran University Ctr for Economic Research & Forecastin	11.08%	10.03%	9.72%	7.64%
	2	Andrea Heuson	Professor of Finance	University of Miami	10.25%	9.20%	9.18%	7.12%
Expectations	3	Barry Habib	CEO	MBS Highway	10.77%	13.84%	8.99%	8.24%
<u>:</u>	4	John Silvia	CEO and Founder		12.04%	11.41%	9.20%	15.13%
cta				Dynamic Economic Strategy				
ě	5	James Smith	Chief Economist	EconForecaster LLC	7.95%	11.35%	7.95%	7.95%
X	6	Matthew Gardner	Real Estate Economist	Independent	8.58%	8.78%	9.31%	6.61%
2.6	7	James Gaines	Chief Economist	Texas A&M University Real Estate Center	12.35%	8.68%	6.09%	11.28%
2022	8	Christy Fields	Managing Principal	Meketa Investment Group	11.30%	10.23%	4.55%	7.64%
2	9	Issi Romem	Economist and Founder	MetroSight	10.24%	7.64%	7.64%	6.08%
	10	Alexei Tchistyi	Associate Professor of Real Estate	Cornell SC Johnson College of Business	15.50%	12.36%	12.36%	12.36%
		rucker remocy.	7.5500idice 1101e5501 Of Near Estate	cornell be somison conege of business	15.5070	12.5070	12.5070	12.5070
						Benchmark:		10.48%
					Panelist	t Expectation		
	Rank	<u>Panelist</u>	<u>Title</u>	<u>Affiliation</u>	Q1 2021	Q2 2021	Q3 2021	Q4 2021
	1	Michael Fratantoni / Joel Kan / Edward S	eil Chief Economist / Deputy Chief Economist / Executive Dir	ec Mortgage Bankers Association / Research Inst. for Housing Ameri	10.24%	11.30%	10.77%	9.83%
	2	Brendan Lowney	Principal, Macroeconomics and Housing	Forest Economic Advisors	9.62%	9.73%	9.93%	9.93%
ns	3	Stacy Sirmans	Director	FSU Center for Real Estate Education & Research				
<u>ş</u> .	4	Jeffrey Zabel		130 Center for Real Estate Education & Research	10.25%			10 25%
;g				Today Hadisəndə	10.25%	8.16%	10.25%	10.25%
6	5		Professor of Economics	Tufts University	12.36%	8.16% 10.25%	10.25% 11.30%	10.25%
Sec	-	Ingo Winzer	President	Vertical IQ	12.36% 9.30%	8.16% 10.25% 9.83%	10.25% 11.30% 11.30%	10.25% 11.30%
Expec	6	Ingo Winzer Michael Englund	President Chief Economist	Vertical IQ Action Economics LLC	12.36% 9.30% 9.52%	8.16% 10.25% 9.83% 9.20%	10.25% 11.30% 11.30% 10.14%	10.25% 11.30% 9.52%
d Expectations	6 7	Ingo Winzer	President	Vertical IQ Action Economics LLC	12.36% 9.30%	8.16% 10.25% 9.83%	10.25% 11.30% 11.30%	10.25% 11.30%
021 Expec		Ingo Winzer Michael Englund	President Chief Economist	Vertical IQ Action Economics LLC	12.36% 9.30% 9.52%	8.16% 10.25% 9.83% 9.20%	10.25% 11.30% 11.30% 10.14%	10.25% 11.30% 9.52%
2021 Expec	7 8	Ingo Winzer Michael Englund Susan Wachter John Ryding / Conrad DeQuadros	President Chief Economist Professor of Real Estate, Finance, City & Regional Planni Chief Economist / Senior Economist	Vertical IQ Action Economics LLC ng Wharton - University of Pennsylvania RDQ Economics	12.36% 9.30% 9.52% 10.25% 9.20%	8.16% 10.25% 9.83% 9.20% 8.16% 9.20%	10.25% 11.30% 11.30% 10.14% 11.30% 10.25%	10.25% 11.30% 9.52% 9.20% 12.35%
2021 Expec	7 8 9	Ingo Winzer Michael Englund Susan Wachter John Ryding / Conrad DeQuadros James Meil	President Chief Economist Professor of Real Estate, Finance, City & Regional Planni Chief Economist / Senior Economist Principal, Industry Analysis	Vertical IQ Action Economics LLC ng Wharton - University of Pennsylvania RDQ Economics ACT Research	12.36% 9.30% 9.52% 10.25% 9.20% 7.64%	8.16% 10.25% 9.83% 9.20% 8.16% 9.20% 9.19%	10.25% 11.30% 11.30% 10.14% 11.30% 10.25% 9.93%	10.25% 11.30% 9.52% 9.20% 12.35% 10.76%
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2021	7 8 9 10	Ingo Winzer Michael Englund Susan Wachter John Ryding / Conrad DeQuadros James Meil Sherwood Clements  Panelist James Smith	President Chief Economist Professor of Real Estate, Finance, City & Regional Planni Chief Economist / Senior Economist Principal, Industry Analysis Professor of Real Estate  Title Chief Economist	Vertical IQ Action Economics LLC ng Wharton - University of Pennsylvania RDQ Economics ACT Research Virginia Tech Pamplin College of Business  Affiliation EconForecaster LLC	12.36% 9.30% 9.52% 10.25% 9.20% 7.64% 11.04% Panelist Q1 2020 9.83%	8.16% 10.25% 9.83% 9.20% 8.16% 9.20% 9.19% 9.20% Benchmark: Expectation 02 2020 10.67%	10.25% 11.30% 11.30% 10.14% 10.25% 9.93% 10.25% :::ss, By Survey Q3 2020 10.56%	10.25% 11.30% 9.52% 9.20% 12.35% 10.76% 13.42% 10.48% y Edition: Q4 2020 8.78%
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2021	7 8 9 10 Rank 1 2 3	Ingo Winzer Michael Englund Susan Wachter John Ryding / Conrad DeQuadros James Meil Sherwood Clements  Panelist James Smith Mark Zandi / Cristian deRitis Joel Naroff Amy Crews Cutts	President Chief Economist Professor of Real Estate, Finance, City & Regional Planni Chief Economist / Senior Economist Principal, Industry Analysis Professor of Real Estate  Title Chief Economist Chief Economist / Deputy Chief Economist President President	Vertical IQ Action Economics LLC ng Wharton - University of Pennsylvania RDQ Economics ACT Research Virginia Tech Pamplin College of Business  Affiliation EconForecaster LLC Moody's Analytics Naroff Economic Advisors Inc AC Cutts & Associates	12.36% 9.30% 9.52% 10.25% 9.20% 7.64% 11.04% Panelist Q1 2020 9.83% 9.29% 10.35% 11.04%	8.16% 10.25% 9.83% 9.20% 8.16% 9.20% 9.19% 9.20% Benchmark: Expectation 02 2020 10.67% 11.83% 9.52%	10.25% 11.30% 11.30% 10.14% 11.30% 10.25% 9.93% 10.25% 10.25% 10.25% 10.56% 11.67% 10.78% 8.58%	10.25% 11.30% 9.52% 9.20% 12.35% 10.76% 13.42% 10.48% yedition: Q4 2020 8.78% 11.28% 8.06% 9.62%
2021	7 8 9 10 10 Rank 1 2 3	Ingo Winzer Michael Englund Susan Wachter John Ryding / Conrad DeQuadros James Meil Sherwood Clements  Panelist James Smith Mark Zandi / Cristian deRitis Joel Naroff	President Chief Economist Professor of Real Estate, Finance, City & Regional Planni Chief Economist / Senior Economist Principal, Industry Analysis Professor of Real Estate  Title Chief Economist Chief Economist / Deputy Chief Economist President	Vertical IQ Action Economics LLC ng Wharton - University of Pennsylvania RDQ Economics ACT Research Virginia Tech Pamplin College of Business  Affiliation EconForecaster LLC Moody's Analytics Naroff Economic Advisors Inc	12.36% 9.30% 9.52% 10.25% 9.20% 7.64% 11.04% Panelist Q1 2020 9.83% 9.29% 10.35%	8.16% 10.25% 9.83% 9.20% 8.16% 9.20% 9.19% 9.20% Expectation 02 2020 10.67% 11.50% 11.83%	10.25% 11.30% 11.30% 10.14% 11.30% 10.25% 9.93% 10.25% :: is, By Survey Q3 2020 01.56% 11.67% 10.78%	10.25% 11.30% 9.52% 9.20% 12.35% 10.76% 13.42% 10.48% y Edition: Q4 2020 8.78% 11.28% 8.06%
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Expectations 2021	7 8 9 10 10 Rank 1 2 3 4 5 6 7	Ingo Winzer Michael Englund Susan Wachter John Ryding / Conrad DeQuadros James Meil Sherwood Clements  Panelist James Smith Mark Zandi / Cristian deRitis Joel Naroff Amy Crews Cutts Michael Englund Maria Fiorini Ramirez Mark Fleming	President Chief Economist Professor of Real Estate, Finance, City & Regional Planni Chief Economist / Senior Economist Principal, Industry Analysis Professor of Real Estate  Title Chief Economist Chief Economist / Deputy Chief Economist President President Chief Economist Chief Economist Chief Executive Officer Senior Vice President, Chief Economist	Vertical IQ Action Economics LLC ng Wharton - University of Pennsylvania RDQ Economics ACT Research Virginia Tech Pamplin College of Business  Affiliation EconForecaster LLC Moody's Analytics Naroff Economic Advisors Inc AC Cutts & Associates Action Economics LLC MFR, Inc. First American Financial Corporation	12.36% 9.30% 9.52% 10.25% 9.20% 7.64% 11.04% Panelist Q1.2020 9.83% 9.29% 10.35% 11.04% 9.31% 8.16%	8.16% 10.25% 9.83% 9.20% 8.16% 9.20% 9.19% 9.20% Expectation Q2 2020 10.67% 11.50% 11.83% 9.52% 9.41% 7.64%	10.25% 11.30% 10.14% 11.30% 10.25% 9.93% 10.25% :: ss, By Survey Q3 2020 10.56% 11.67% 10.78% 8.58% 9.41%	10.25% 11.30% 9.52% 9.20% 12.35% 10.76% 13.42% 10.48% yedition: Q4 2020 8.78% 11.28% 8.06% 9.62% 8.99% 9.52% 8.89%
2021	7 8 9 10 10 2 3 4 5 6 7 8	Ingo Winzer Michael Englund Susan Wachter John Ryding / Conrad DeQuadros James Meil Sherwood Clements  Panelist James Smith Mark Zandi / Cristian deRitis Joel Naroff Amy Crews Cutts Michael Englund Maria Fiorini Ramirez Mark Fleming John Silvia	President Chief Economist Professor of Real Estate, Finance, City & Regional Planni Chief Economist / Senior Economist Principal, Industry Analysis Professor of Real Estate  Title Chief Economist Chief Economist / Deputy Chief Economist President President Chief Economist CEO and Founder	Vertical IQ Action Economics LLC ng Wharton - University of Pennsylvania RDQ Economics ACT Research Virginia Tech Pamplin College of Business  Affiliation EconForecaster LLC Moody's Analytics Naroff Economic Advisors Inc AC Cutts & Associates Action Economics LLC MFR, Inc. First American Financial Corporation Dynamic Economic Strategy	12.36% 9.30% 9.52% 10.25% 9.20% 7.64% 11.04% Panelist 01.2020 9.83% 9.29% 10.35% 11.04% 9.31% 8.16% 8.16% 11.30%	8.16% 10.25% 9.83% 9.20% 8.16% 9.20% 9.19% 9.20% Benchmark: Expectation Q2 2020 10.67% 11.55% 9.52% 9.41% 7.64% 10.25% 11.72%	10.25% 11.30% 11.30% 10.14% 11.30% 10.25% 9.93% 10.25% 10.25% 10.25% 10.56% 11.67% 10.56% 11.67% 8.58% 9.41% 9.20% 7.12%	10.25% 11.30% 9.52% 9.20% 12.35% 10.76% 13.42% 10.48% yedition: Q4.2020 8.78% 11.28% 8.06% 9.62% 8.99% 9.52% 8.89% 9.52% 8.89% 5.47%
Expectations 2021	7 8 9 10 Rank 1 2 3 4 5 6 7 8 9	Ingo Winzer Michael Englund Susan Wachter John Ryding / Conrad DeQuadros James Meil Sherwood Clements  Panelist James Smith Mark Zandi / Cristian deRitis Joel Naroff Amy Crews Cutts Michael Englund Maria Fiorini Ramirez Mark Fleming John Silvia Barry Habib	President Chief Economist Professor of Real Estate, Finance, City & Regional Planni Chief Economist / Senior Economist Principal, Industry Analysis Professor of Real Estate  Title Chief Economist Chief Economist / Deputy Chief Economist President President President Chief Economist Country Country Chief Economist Country Country Chief Economist Country Country Chief Economist Country Country Chief Economist CEO and Founder CEO	Vertical IQ Action Economics LLC ng Wharton - University of Pennsylvania RDQ Economics ACT Research Virginia Tech Pamplin College of Business  Affiliation EconForecaster LLC Moody's Analytics Naroff Economic Advisors Inc AC Cutts & Associates Action Economics LLC MFR, Inc. First American Financial Corporation Dynamic Economic Strategy MBS Highway	12.36% 9.30% 9.52% 10.25% 9.20% 7.64% 11.04% Panelist 01.2020 9.83% 9.29% 10.35% 11.04% 8.16% 8.16% 8.16%	8.16% 10.25% 9.83% 9.20% 8.16% 9.20% 8.16% 9.20% 9.19% 9.20% Expectation Q2 2020 10.67% 11.50% 11.83% 9.52% 9.41% 7.64% 10.25% 11.72% 9.81%	10.25% 11.30% 10.14% 11.30% 10.125% 9.93% 10.25% 15. By Survey Q3 2020 10.56% 10.78% 8.58% 9.41% 9.20% 7.12% 10.04%	10.25% 11.30% 9.20% 9.20% 12.35% 10.76% 13.42% 10.48% y Edition: Q4 2020 8.78% 11.28% 8.06% 9.62% 8.99% 9.52% 8.89% 9.52% 8.89% 9.52% 8.16%
Expectations 2021	7 8 9 10 10 2 3 4 5 6 7 8	Ingo Winzer Michael Englund Susan Wachter John Ryding / Conrad DeQuadros James Meil Sherwood Clements  Panelist James Smith Mark Zandi / Cristian deRitis Joel Naroff Amy Crews Cutts Michael Englund Maria Fiorini Ramirez Mark Fleming John Silvia	President Chief Economist Professor of Real Estate, Finance, City & Regional Planni Chief Economist / Senior Economist Principal, Industry Analysis Professor of Real Estate  Title Chief Economist Chief Economist / Deputy Chief Economist President President Chief Economist CEO and Founder	Vertical IQ Action Economics LLC ng Wharton - University of Pennsylvania RDQ Economics ACT Research Virginia Tech Pamplin College of Business  Affiliation EconForecaster LLC Moody's Analytics Naroff Economic Advisors Inc AC Cutts & Associates Action Economics LLC MFR, Inc. First American Financial Corporation Dynamic Economic Strategy	12.36% 9.30% 9.52% 10.25% 9.20% 7.64% 11.04% Panelist 01.2020 9.83% 9.29% 10.35% 11.04% 9.31% 8.16% 8.16% 11.30%	8.16% 10.25% 9.83% 9.20% 8.16% 9.20% 9.19% 9.20% Benchmark: Expectation Q2 2020 10.67% 11.55% 9.52% 9.41% 7.64% 10.25% 11.72%	10.25% 11.30% 11.30% 10.14% 11.30% 10.25% 9.93% 10.25% 10.25% 10.25% 10.56% 11.67% 10.56% 11.67% 8.58% 9.41% 9.20% 7.12%	10.25% 11.30% 9.52% 9.20% 12.35% 10.76% 13.42% 10.48% yedition: Q4.2020 8.78% 11.28% 8.06% 9.62% 8.99% 9.52% 8.89% 9.52% 8.89% 9.52%



# HOME PRICE EXPECTATIONS SURVEY

### **Top-10 Rankings for 2024**

		3-Year Horizon (Q4 2024 / Q4 20	021)		Benchmark	:	18.88%
				Panelist	Expectation	is, By Survey	Edition:
Rank	Panelist	Title	Affiliation	Q1 2022	Q2 2022	Q3 2022	Q4 202
1	Eli Beracha	Assistant Professor	Florida International University	17.34%	17.91%	19.34%	17.89%
2	David Downs	Real Estate Finance Professor	Virginia Commonwealth University	15.99%	18.15%	17.33%	18.019
3	Matthew Fienup / Dan Hamilton	Executive Director / Director of Economics	Cal Lutheran University Ctr for Economic Research & Forecastin	20.52%	21.15%	21.02%	18.409
4	Issi Romem	Chief Economist	MetroSight	21.26%	17.87%	17.87%	16.69%
5	Christy Fields	Managing Principal	Meketa Investment Group	17.98%	17.94%	15.01%	17.879
6	John Silvia	CEO and Founder	Dynamic Economic Strategy	20.10%	18.32%	18.16%	24.579
7	Rick Sharga	Executive Vice President	CJ Patrick Company	17.91%	17.91%	16.50%	14.819
8	Matthew Gardner	Real Estate Economist	Independent	16.39%	19.55%	24.28%	18.659
9	Andrea Heuson	Professor of Finance	University of Miami	17.97%	15.75%	22.28%	16.769
10	David Berson	Chief U.S. Economist	Cumberland Advisors	18.89%	19.65%	13.37%	12.09%
					Benchmark		18.889
				Panelist	Expectation		-0.00
Rank	Panelist	Title	Affiliation	O1 2021	O2 2021	Q3 2021	Q4 202
1	Michael Englund	Chief Economist	Action Economics LLC	15.87%	16.08%	18.74%	19.599
2			ve Direc Mortgage Bankers Association / Research Inst. for Housing Americ	19.50%	20.65%	20.07%	15.549
3	Brendan Lowney	Principal, Macroeconomics and Housing	Forest Economic Advisors	16.31%	16.53%	17.74%	17.74
4	Jeffrey Zabel	Professor of Economics	Tufts University	21.35%	15.76%	17.98%	16.879
5	Sherwood Clements	Professor of Real Estate	Virginia Tech Pamplin College of Business	16.87%	16.30%	18.52%	23.069
6	James Meil	Principal, Industry Analysis	ACT Research	13.02%	17.49%	18.18%	20.189
7	Charles Dougherty / Mark Vitner*	Economist / Senior Economist	Wells Fargo	20.22%	23.15%	19.66%	22.029
8	Douglas Holtz-Eakin	President	American Action Forum	21.35%	24.79%	19.17%	17.949
9	David Berson	Chief U.S. Economist	Cumberland Advisors	15.10%	15.74%	16.29%	18.249
10	Marsha Courchane	Director, Financial Economics	CRA International	15.64%	21.92%	19.88%	15.439
•					•	•	
				Danalia	Benchmark		18.889
Rank	Panelist	Title	Affiliation	Q1 2020	Expectation Q2 2020	is, By Survey Q3 2020	Q4 202
1	Mark Zandi / Cristian deRitis	Chief Economist / Deputy Chief Economist	Moody's Analytics	12.86%	17.94%	18.07%	16.319
2	Joel Naroff	President	Naroff Economic Advisors Inc	14.11%	16.86%	15.98%	13.579
3	Stacy Sirmans	Director	FSU Center for Real Estate Education & Research	14.66%	16.87%	19.10%	10.339
4	Amy Crews Cutts	President	AC Cutts & Associates	15.98%	14.55%	14.01%	15.329
5	James Smith	Chief Economist	EconForecaster LLC	13.89%	15.54%	15.43%	14.669
6	John Silvia	CEO and Founder	Dynamic Economic Strategy	17.31%	21.89%	16.20%	8.229
7		Chief Economist	Action Economics LLC	14.44%	14.34%	14.34%	14.129
8	Michael Englund Mark Fleming	Senior Vice President, Chief Economist	First American Financial Corporation	12.70%	15.76%	11.41%	14.12
			· · · · · · · · · · · · · · · · · · ·			12.38%	13.249
9	Barry Habib	CEO	MBS Highway	13.67%	15.08%		
10	Maria Fiorini Ramirez	Chief Executive Officer	MFR, Inc.	11.40%	11.41%	14.66%	13.689

	4-Year Horizon (Q4 2024 / Q	4 2020)		Benchmark:		36.8
			Panelist	Expectation	s, By Survey	Edition
nk Panelist	<u>Title</u>	<u>Affiliation</u>	Q1 2021	Q2 2021	Q3 2021	Q4 2
1 Charles Dougherty / Ma	rk Vitner* Economist / Senior Economist	Wells Fargo	29.24%	36.82%	34.85%	41.4
Michael Fratantoni / Joe	Kan / Edward Seile Chief Economist / Deputy Chief Economist / Exe	ecutive Direc Mortgage Bankers Association / Research Inst. for Housing Amer	i 31.81%	33.08%	32.44%	34.0
Douglas Holtz-Eakin	President	American Action Forum	31.06%	39.15%	31.45%	32.0
Mark Fleming	Senior Vice President, Chief Economist	First American Financial Corporation	33.52%	32.22%	29.78%	44.7
Michael Englund	Chief Economist	Action Economics LLC	24.33%	30.01%	35.36%	39.3
Brendan Lowney	Principal, Macroeconomics and Housing	Forest Economic Advisors	24.45%	29.11%	33.40%	36.
Edward Pinto	Resident Fellow	American Enterprise Institute	25.18%	38.89%	39.61%	45.2
B Donald Haurin	Professor of Economics, Finance, and Public Pe	olicy Ohio State University	21.05%	28.75%	35.81%	35.
James Smith	Chief Economist	EconForecaster LLC	23.60%	26.35%	38.10%	38.3
.0 David Berson	Chief U.S. Economist	Cumberland Advisors	23.38%	30.21%	33.15%	40.5
				Benchmark:		36.8
			Panelist	Expectation	is, By Survey	Editio
nk Panelist	<u>Title</u>	<u>Affiliation</u>	Q1 2020	Q2 2020	Q3 2020	Q4 2
John Silvia	CEO and Founder	Dynamic Economic Strategy	24.12%	30.42%	22.24%	11.2
2 Amy Crews Cutts	President	AC Cutts & Associates	20.62%	19.13%	19.25%	22.9
Stacy Sirmans	Director	FSU Center for Real Estate Education & Research	20.40%	21.54%	25.06%	14.
James Smith	Chief Economist	EconForecaster LLC	17.54%	19.81%	19.70%	23.0
Michael Englund	Chief Economist	Action Economics LLC	19.94%	19.25%	19.37%	20.
Joel Naroff	President	Naroff Economic Advisors Inc	16.62%	21.19%	20.16%	20.
Barry Habib	CEO	MBS Highway	17.30%	21.64%	19.23%	19.4
Carlos Garriga	Senior Vice President and Director of Research	h Federal Reserve Bank of St. Louis	19.25%	7.71%	13.37%	36.9
Mark Fleming	Senior Vice President, Chief Economist	First American Financial Corporation	17.21%	20.39%	16.42%	21.0
Stephen Stanley	Chief Economist	Santander U.S. Capital Markets LLC	18.45%	18.11%	19.25%	15.8



### HOME PRICE EXPECTATIONS SURVEY

#### Top-10 Rankings for 2024

		5-Year Horizon (Q4 2024/ Q4 2019	9)		Benchmark:		51.39%
				Panelist	Expectation	s, By Survey	Edition:
Rank	Panelist	<u>Title</u>	<u>Affiliation</u>	Q1 2020	Q2 2020	Q3 2020	Q4 2020
1	John Silvia	CEO and Founder	Dynamic Economic Strategy	30.57%	36.29%	27.75%	15.36%
<sub>ω</sub> 2	Amy Crews Cutts	President	AC Cutts & Associates	25.26%	24.14%	24.62%	31.41%
ctations 4	James Smith	Chief Economist	EconForecaster LLC	23.30%	23.17%	23.05%	35.47%
<b>#</b> 4	Stacy Sirmans	Director	FSU Center for Real Estate Education & Research	27.62%	25.19%	31.31%	20.48%
5	Michael Englund	Chief Economist	Action Economics LLC	25.93%	23.90%	24.50%	28.70%
₩ 6	Joel Naroff	President	Naroff Economic Advisors Inc	21.40%	23.73%	24.96%	28.69%
	Barry Habib	CEO	MBS Highway	23.87%	18.97%	26.03%	27.72%
8   2020	Mark Fleming	Senior Vice President, Chief Economist	First American Financial Corporation	21.78%	22.80%	22.24%	29.32%
9	Maria Fiorini Ramirez	Chief Executive Officer	MFR, Inc.	19.34%	17.62%	31.27%	26.28%
10	Carlos Garriga	Senior Vice President and Director of Research	Federal Reserve Bank of St. Louis	24.02%	5.56%	17.11%	47.25%

Panelists eligible for a 2024 ranking were those members who participated in at least one of the four 2024 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 2024 award pertaining to expectations made in 2021, a panelist would have had to submit forecast data for each of the four quarterly surveys that Pulsenomics

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) home price percentage changes for the five time horizons that ended in 2024:

Time Horizon	Expectations Vintage(s)
2024 (1 year horizon)	2024
2023-2024 (2 year horizon)	2020, 2021, 2022, 2023
2022-2024 (3 year horizon)	2020, 2021, 2022
2021-2024 (4 year horizon)	2020, 2021
2020-2024 (5 year horizon)	2020

Rankings are based on a comparison of each panelist's expectations for home price changes to the actual change as measured by the applicable benchmark index.\*

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 (Q4/Q4) percentage change in the applicable benchmark data is computed. These sums are then sorted in ascending order to generate rankings (i.e., the lowest sum represents the least average error/highest rank).

\*In Q4 2023, the survey benchmark transitioned to the non-seasonally adjusted Fannie Mae Home Price Index (FNM-HPI) from the Zillow U.S. Home Value Index, All Homes, Raw, Mid-Tier (ZHVI). The benchmark growth rates displayed in the table above are derived from a combination of (a) ZHVI growth rates for the periods preceding Q4 2023 and (b) FNM-HPI growth rates for Q4 2023 and all of 2024.